MATHEMATICS

Primary pupil's book

Year

FOREWORD

Dear Student,

Rwanda Basic Education Board (REB) is honored to present Primary 2 Mathematics book. This book will serve as a guide to competence-based teaching and learning to ensure consistency and coherence in the learning of the Mathematics. The Rwandan educational philosophy is to ensure that you achieve full potential at every level of education which will prepare you to be well integrated in society and be ready for further studies.

The government of Rwanda emphasizes the importance of aligning teaching and learning materials with the syllabus to facilitate your learning process. Many factors influence what you learn, how well you learn and the competences you acquire. Those factors include the relevance of the specific content, the quality of teachers' pedagogical approaches, the assessment strategies and the instructional materials available. In this book, we paid special attention to the activities that facilitate the learning process in which you can develop your ideas and make new discoveries during concrete activities carried out individually or with peers.

In competence-based curriculum, learning is considered as a process of active building and developing knowledge and meanings by the learner where concepts are mainly introduced by an activity, situation or scenario that helps the learner to construct knowledge, develop skills and acquire positive attitudes and values.

For efficiency use of this textbook, your role is to:

- Work on given activities which lead to the development of skills;
- Share relevant information with other learners through presentations, discussions, group work and other active learning techniques such as role play, case studies, investigation and research in the library, on internet or outside;
- Participate and take responsibility for your own learning;
- Draw conclusions based on the findings from the learning activities.

To facilitate you in doing activities, the content of this book is self explanatory so that you can easily use it yourself, acquire and assess your competences. The book is made of units as presented in the syllabus.

Even though the book has some worked examples, you will succeed on the application activities depending on your ways of reading, questioning, thinking and grappling ideas of calculus not by searching for similar-looking worked out examples. Furthermore, to succeed in Mathematics, you are asked to keep trying.

I wish to sincerely express my appreciation to the people who contributed towards the editing and the translation of this book; particularly, REB staff and teachers for their technical support.

Any comment or contribution would be welcome to the improvement of this text book for next editions.

Dr. MBARUSHIMANA Nelson
Director General, REB

ACKNOWLEDGEMENT

I wish to express my appreciation to the people who played a major role in the editing and the translation of this book. It would not have been successful without active participation of different education stakeholders.

I owe gratitude to different universities and schools in Rwanda that allowed their staff to work with REB in the in-house textbooks production initiative.

I wish to extend my sincere gratitude to teachers whose efforts during editing and the translation of this book were very much valuable.

Finally, my word of gratitude goes to Rwanda Basic Education Board staffs who were involved in the whole process of in-house textbook production.

Joan MURUNGI
Head of CTLR Department

TABLE OF CONTENT

0. PRELIMINARY ACTIVITIES

Activity 0.1

Read and fill in the missing numbers in the table below

...	1	...	3	...	5	...	7	...	9	...	
11	...	13	...	15	...	17	...	19	...	21	
...	23	...	25	...	27	...	29	...	31	...	
33	...	35	...	37	...	39	...	41	...	43	
...	45	...	47	...	49	...	51	...	53	...	
55	...	57	...	59	...	61	...	63	...	65	
...	67	...	69	...	71	...	73	...	75	...	
77	...	79	...	81	...	83	...	85	...	87	
...	89	...	91	...	93	...	95	...	97	...	99	...

Activity 0.2

Read and fill in the missing numbers in the table below

0	...	2	...	4	...	6	...	8	...	10	
...	12	...	14	...	16	...	18	...	20	...	
22	...	24	...	26	...	28	...	30	...	32	
...	34	...	36	...	38	...	40	...	42	...	
44	...	46	...	48	...	50	...	52	...	54	
...	56	...	58	...	60	...	62	...	64	...	
66	...	68	...	70	...	72	...	74	...	76	
...	78	...	80	...	82	...	84	...	86	...	
88	...	90	...	92	...	94	...	96	...	98	...	100

Activity 0.3

Use <, > or = to compare the following numbers

a) 23 ☐ 32 d) 98 ☐ 89 g) 26 ☐ 26

b) 46 ☐ 64 e) 72 ☐ 72 h) 36 ☐ 63

c) 87 ☐ 78 f) 95 ☐ 59 i) 42 ☐ 24

Activity 0.4

Arrange these numbers from the smallest to the largest

a) 67, 76, 56, 65 d) 38, 26, 83, 62

b) 89, 47, 98, 74 e) 32, 34, 23, 43

c) 95, 45, 59, 54 f) 52, 42, 25, 24

Activity 0.5

Arrange these numbers from the largest to the smallest

a) 45, 35, 53, 54 d) 63, 78, 87, 36

b) 63, 73, 36, 37 e) 94, 67, 49, 76

c) 28, 48, 84, 82 f) 82, 64, 28, 46

Activity 0. 6

Write these numbers in the expanded form :

a) 65 = ☐+☐ d) 54 = ☐+☐ g) 32 = ☐+☐

b) 76 = ☐+☐ e) 49 = ☐+☐ h) 21 = ☐+☐

c) 89 = ☐+☐ f) 97 = ☐+☐ i) 18 = ☐+☐

Activity 0.7

Write the number that was expanded .

a) 80 + 9 = ☐ d) 40 + 1 = ☐ g) 50 + 2 = ☐

b) 60 + 7 = ☐ e) 20 + 6 = ☐ h) 30 + 3 = ☐

c) 10 + 5 = ☐ f) 90 + 0 = ☐ i) 70 + 4 = ☐

Activity 0.8

Work out the following

a) (90×1) + (9×0) =
b) (80×1) + (9×1) =
c) (70×1) + (8×1) =
d) (60×1) + (7×1) =
e) (50×1) + (6×1) =
f) (40 × 1) + (5×1) =
g) (30 × 1) + (4×1)=
h) (20 × 1) + (3×1) =
i) (10 × 1) + (2×1) =
j) (30 × 1) + (1×1) =

Activity 0.9

Write each digit under a correct place value.

Number	Tens (T)	Ones (O)
78		
69		
24		
54		
16		
46		
61		
97		
36		

Activity 0.10

Write a two - digit number that was grouped in tens and ones

Example: 9Tens 0 Ones = 90

a) 6Tens 8 Ones =
b) 8Tens 1 Ones =
c) 7Tens 2 Ones =
d) 6 T 3 O =
e) 5 T 4 O =
f) 4 T 5 O =
g) 3 T 6 O =
h) 2 T 7 O =
i) 1 T 8 O =

Activity 0.11

Use the table of place values and work out this exercise

Example: 56 + 12 =

Tens (T)	Ones (O)
5	6
+ 1	2
6	8

56 + 12 = 68

a) 54 + 33 =
b) 48 + 21 =
c) 36 + 20 =
d) 45 + 44 =
e) 53 + 46 =

Activity 0.12

Use the table of place values and work out this exercise

Example: 49 - 24 =

Tens (T)	Ones (O)
4	9
- 2	4
2	5

49 - 24 = 25

a) 78 – 17 =
b) 56 – 45 =
c) 94 – 31 =
d) 56 – 45 =
e) 85 – 53 =

Activity 0.13

Find the missing numbers

a) 26 = ☐ – 31
b) 74 = 42 + ☐
c) 63 = ☐ – 14
d) 58 = 41 + ☐
e) 42 = ☐ + 25
f) 85 = 99 – ☐
g) 31 = ☐ – 35
h) 29 = 40 – ☐

Activity 0.14

Use counters to add or subtract the following numbers

a) (99 - 54) + 25 =
b) (72 + 15) - 34 =
c) (23 + 24) + 43 =
d) (44 +52) - 52 =
e) (87– 57) + 61 =
f) (50 + 40) - 70 =
g) (53 - 21)+ 51=
h) (42+ 57)- 62=
i) (65 - 31)+ 45=

Activity 0.15

Use counters to find the common difference in the following patterns

Example: 33, 40, 47: The common difference is 7 because 7 (40-33=7)

a) 1, 3, 5, 7: The common difference is ...

b) 27, 20, 13: The common difference is ...

c) 41, 47, 53: The common difference is ...

d) 94, 90, 86: The common difference is ...

e) 25, 30, 35: The common difference is ...

Activity 0.16

Use counters to find the missing numbers

a) 50, 54, 58, ☐, ☐

b) 97, 92, 87, ☐, ☐

c) 42, 50, 58, ☐, ☐

d) 56, 50,44, ☐, ☐

e) 29, 25, 21, ☐, ☐

f) 87, 90, 93, ☐, ☐

g) 14, 19, 24, ☐, ☐

h) 35, 33, 31, ☐, ☐

i) 88, 90, 92, ☐, ☐

j) 73, 68, 63, ☐, ☐

k) 55, 61, 67, ☐, ☐

l) 71, 75, 79 , ☐, ☐

Activity 0.17

Solve the following word problems

a) Gasaro has **35** bananas, her brother has **42** bananas. How many bananas do they have altogether .

b) Muhoza bought one pen at **50**Frw and a slice of bread of **40**Frw. How much money did she pay?

c) Rugira has a farm with **45** cows. There are **32** cows in the farm of his wife. How many cows do they have altogether?

Activity 0.18

Complete the following tables:

a)

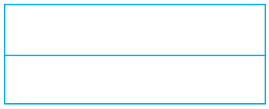
X2	1	2	3	4	5	6	7	8	9	10

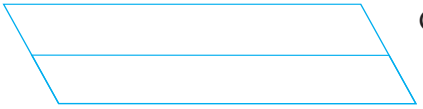
b)

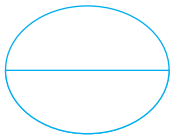
÷2	2	4	6	8	10	12	14	16	18	20

Activity 0.19

Shade $\frac{1}{2}$ of each of the following shapes

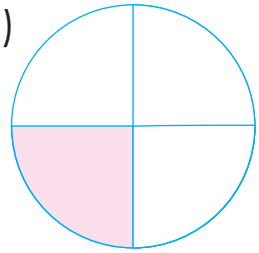
a) 

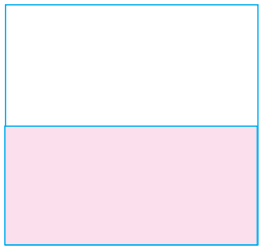
b) 

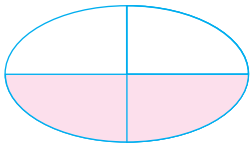
c) 

Activity 0.20

Write the fraction of the shaded part

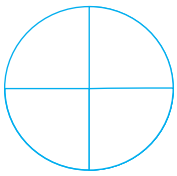
a) 

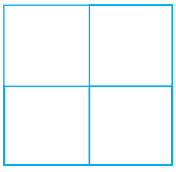
b) 

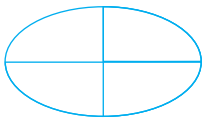
c) 

Activity 0.21

Shade $\frac{1}{4}$ of each of the following shapes

a) 

b) 

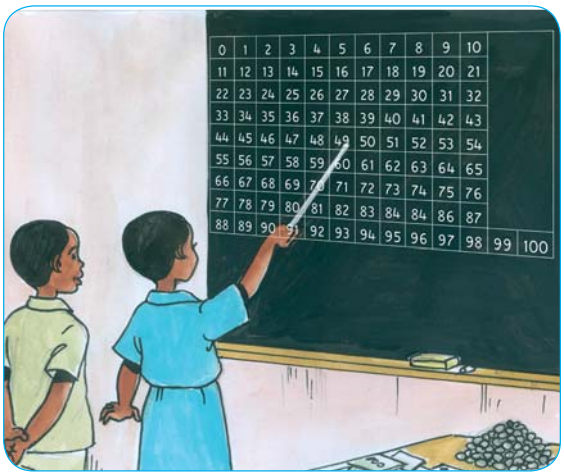
c) 

Unit 1 Whole numbers from 0 up to 200

1.1 Count, read and write whole numbers from 0 up to 200

Activity 1.1.1

Study the picture below and tell your friends what is being done



Activity 1.1.2

Make a collection of 100 small objects (such as stones), add two more objects and then count the total number of all objects.

Activity 1.1.3

Make a collection of 200 counters; count them from one up to 200 by taking one by one.

Activity 1.1.4

Make a collection of 200 beans; take away one by one and count backwards by saying the number of remaining beans until you remain with 128 beans.

Count the number of beans taken away to the new group.

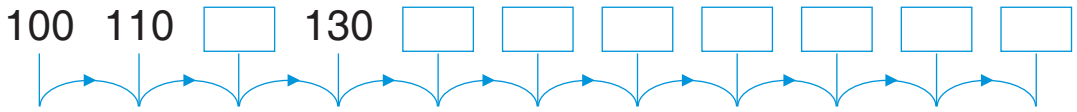
Activity 1.1.5

Study table below and read loudly using number names.

100	101	102	103	104	105	106	107	108	109
110	111	112	113	114	115	116	117	118	119
120	121	122	123	124	125	126	127	128	129
130	131	132	133	134	135	136	137	138	139
140	141	142	143	144	145	146	147	148	149
150	151	152	153	154	155	156	157	158	159
160	161	162	163	164	165	166	167	168	169
170	171	172	173	174	175	176	177	178	179
180	181	182	183	184	185	186	187	188	189
190	191	192	193	194	195	196	197	198	199
200									

Activity 1.1.6

Count in tens and fill the following number line:



Activity 1.1.7

You have a container with number cards of the following numbers: **138, 117, 136, 186**, and **174**. Pick randomly one number card from the container and tell your collegue the number name on number card you have picked.

Activity 1.1.8

Study the picture below carefully.
What do you see?

Using your own number cards, arrange their numbers from 100 up to 200.

Activity 1.1.9

Fill in the missing numbers on the number lines:

a) 100 ☐ 120 ☐ 140 ☐ ☐ 170 ☐ ☐ ☐

b) 100 ☐ 102 ☐ 104 ☐ 106 ☐ 108 ☐ 110

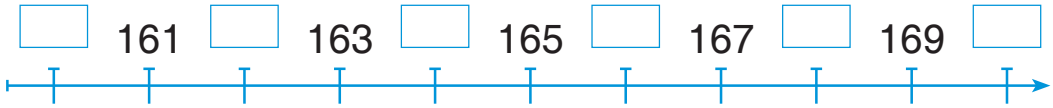
c) ☐ 111 ☐ 113 ☐ 115 ☐ 117 ☐ 119 ☐

d) ☐ ☐ 122 ☐ 124 ☐ 126 ☐ 128 ☐ 130

e) ☐ 131 ☐ 133 ☐ 135 ☐ 137 ☐ 139 ☐

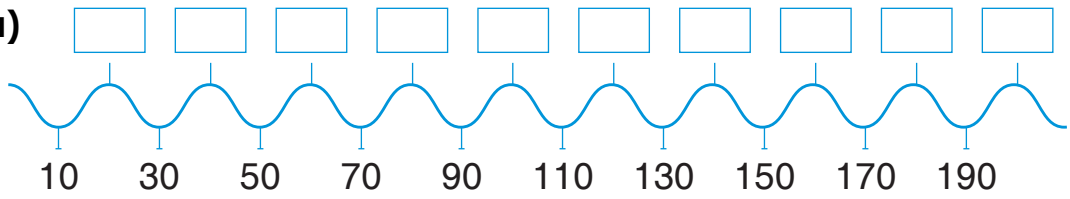
f) ☐ ☐ 142 ☐ 144 ☐ 146 ☐ 148 ☐ 150

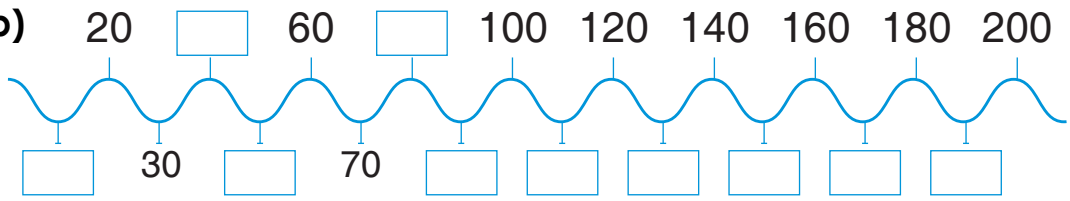
g) 

h) 

Activity 1.1.10

Fill in the missing numbers on the following number lines correctly. Read all numbers you have on the number lines.

a) 

b) 

Activity 1.1.11

Write the following numbers in words:

a) From 100 up to 125
b) From 126 up to 150
c) From 151 up to 175
d) From 176 up to 200
e) From 161 up to 180
f) From 176 to 190

Activity 1.1.12

Read and write the following numbers in figures

a) One hundred thirty five
b) One hundred twenty three
c) One hundred eighty four
d) One hundred fifty seven
f) One hundred twenty three.

Activity 1.1.13

Work in pairs and fill in the missing numbers in the table below.

200	199									190
150					145					140
110										100
170		168								160
130	129									120
190					185					180
140										130
120			117				113			110
160		158				154				150
180										170

1.2 Place value of each digit for numbers from 0 up to 200

Activity 1.2.1

Use the example below and write the following numbers in the table of place values

Example: 135

Hundreds (H)	Tens (T)	Ones (O)
1	3	5

Activity 1.2.2

Group these numbers into hundreds (H), tens (T) and ones (O).

a) 113 = ...H ....T .....O

b) 124 = ...H ....T .....O

c) 135 = ...H ....T .....O

d) 146 = ...H ....T .....O

e) 157 = ...H ....T .....O

f) 168 = ...H ....T .....O

g) 179 = ...H ....T .....O

h) 180 = ...H ....T .....O

i) 191 = ...H ....T .....O

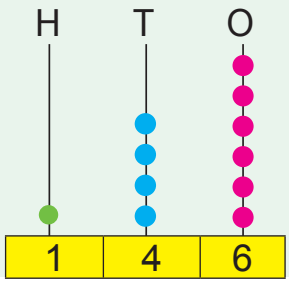
Activity 1.2.3

1) Write down the numbers that were grouped into hundreds (H), tens (T) and ones (O).

a) 1 T 4 O 1 H =
b) 1 H 6 O 7 T =
c) 1 H 6 O 7 T =
d) 9 T 7 O 1 H =
e) 2 O 0 T 1 H =
f) 2 O 1 H 1 T =
g) 2 O 1 H 6 T =
h) 4 T 7 O 1 H =
i) 6 T 1 H 8 O =
j) 8 O 1 H 0 T =
k) 1 T 1 H 2 O =
l) 1 H 5 O 4 T =

2) Use the abacus and represent these numbers into hundreds (H), tens (T) and ones (O).

Example: 146



165 107 115

29 200 59

1.3. Comparison of numbers from 0 up to 200

Activity 1.3.1

Choose the number cards randomly from the container.

Put them on a table then compare using <, > or =

Activity 1.3.2

Use <, > or = to compare the number cards correctly

Example:

a) 130 < 140 b) 179 = 179 c) 155 > 135

Activity 1.3.3

Read and compare pupils' marks

In the first term, P2 pupils worked out of 200 marks. Kagabo got 190, John got 151, Martha got 173, karisa has got 180 and Uwera got 190.

Choose two pupils, compare their marks and say who got more or less marks.

a) Kagabo and Martha
b) John and Martha
c) Kagabo and Uwera
d) Kalisa and martha
e) Kagabo and John
f) Kagabo and Kalisa
g) John and Kalisa
h) Uwera and Martha

Activity 1.3.4

Study the pictures showing the harvest of different classes

The number of cabbages produced by each class is given in this table:

Class	P1	P2	P3	P4	P5	P6
Number of cabbages produced	125	105	156	140	162	158

Compare the harvest of the following classes using >,< or =:

a) P1__P2 d) P4 ___P5 g) P1 ___ P5

b) P2 __P3 e) P6 ___P5 h) P2 __ P4

c) P1 ___P3 f) P2 ____P5 i) P6 ___P3

Let me use <, > and = to compare numbers

a) 169 ☐ 169 f) 163 ☐ 131

b) 118 ☐ 185 g) 122 ☐ 122

c) 127 ☐ 127 h) 181 ☐ 113

d) 136 ☐ 167 i) 190 ☐ 104

e) 145 ☐ 158 j) 101 ☐ 115

1.4 Arranging numbers within 200 in ascending and descending order

1.4.1 Arranging numbers from smallest to the largest.

Activity 1.4.1

Form groups of counters of the following numbers: **150, 100, 180, 170, 200**. Count and arrange them from the smallest to the largest.

Activity 1.4.2

Study the number cards on the following pictures: How are these numbers arranged?

Let me arrange numbers in ascending order

a) 125, 175, 103
b) 135, 184, 200
c) 197, 100, 151
d) 145, 182, 123
e) 142, 173, 165
f) 109, 199, 137
g) 147, 179, 152
h) 128, 109. 168
i) 194, 121, 175

1.4.2 Arranging numbers in descending order

Activity 1.4.3

Form groups of counters of the following numbers: **115, 195, 200, 155, 170**. Count and arrange them from the largest to the smallest.

Activity 1.4.4

Study the number cards on the following pictures: How are these numbers arranged?

Do the same and arrange your number cards from the largest to the smallest.

Activity 1.4.5

Arrange the following numbers from the smallest to the largest.

a) 152, 175, 130
b) 153, 148, 200
c) 179, 100, 115
d) 154, 128, 132
e) 124, 137, 156
f) 190, 199, 173

Let me work out

1. Arrange these numbers from the smallest to the largest.

a) 142,124,138
b) 129,192,119
c) 138,183,108
d) 174,147,107
e) 173,137,183
f) 176,167,179
g) 105, 150,158
h) 124,104,142
i) 108,180,184
j) 134,104,143

2. Arrange these numbers from the largest to the smallest number.

a) 138,174,183
b) 123,132,129
c) 172, 127,107
d) 146,106,164
e) 194,149,191
f) 172,127,192
g) 178,187,124
h) 163,106,136
i) 139,109,193
j) 163,143,123

1.5 Addition of numbers whose sum does not exceed 200

1.5.1 Mental calculation

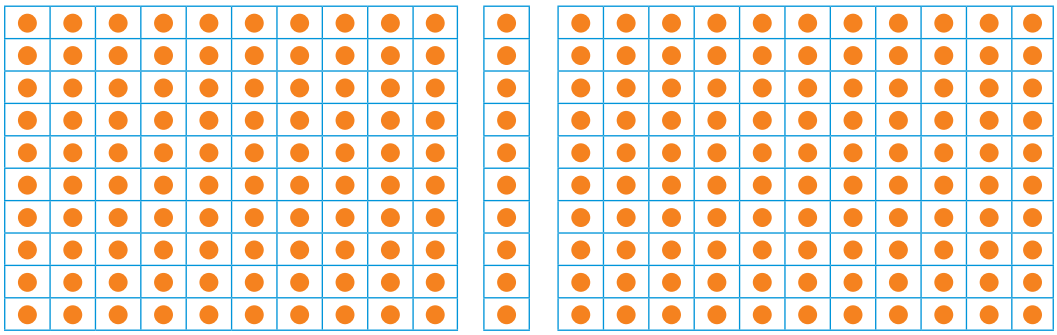
Activity 1.5.1

Mental work : Get two number cards, think and give the sum of the two numbers.

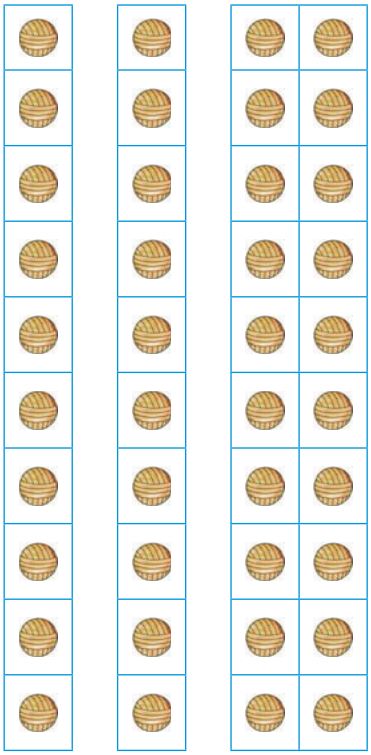
Activity 1.5.2

Count the number for two groups of counters and tell their total number

a) 100 + 10 = ☐



b) 10 + 10 = ☐



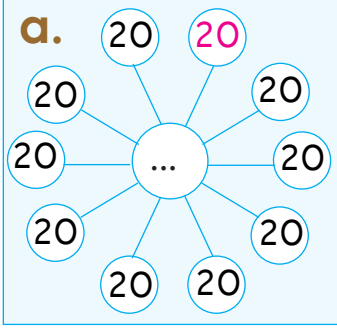
c) 20 + 10 = ☐

d) 100 + 20 =

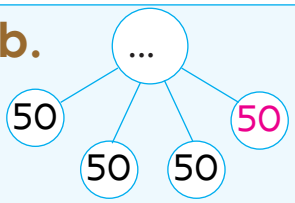
Activity 1.5.3

Start by the number in the red color, add and write the answer in an empty box.

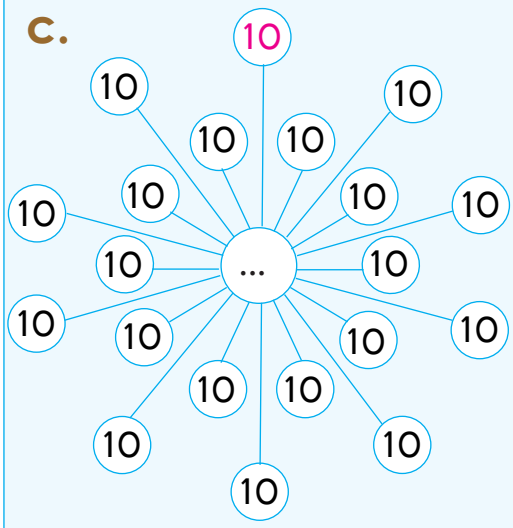
a.



b.



c.



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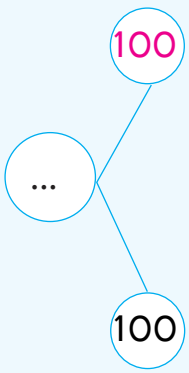


1.5.2 Addition without carrying

Activity 1.5.4

Form two groups of counters: the first group contains 95 counters, the second group contains 104 counters. Put together the two groups and find the total number of all counters.

Activity 1.5.5

Use counting materials, count and find the missing number.

a) 101 + ☐ = 142
b) 155 + ☐ = 178
c) 166 + ☐ =186
d) 101 + ☐ = 164
e) 103 + ☐ = 156
f) 100 + ☐ = 138
g) 127 + ☐ = 147
h) 118 + ☐ = 159
i) 105 + ☐ =156
j) 134 + ☐ =178
k) 162 + ☐ =196
l) 112 + ☐ =146

Activity 1.5.6

Use the following number cards and cards with + and = and do the task below:

A.	121	132	114	102	153	162
B.	41	45	62	71	22	34
C.	196	175	177	173	162	176

- Take one number card from A ;
- Put there the card with +
- Continue with a number card from B;
- Put there the card with the sign =
- Then, select the answer from number cards for the group C.

Example: 121 + 41 = 162

Activity 1.5.7

Study this example and add the numbers that follow

Example:

Hundreds (H)	Tens (T)	Ones (O)
1	2	3
+ ↓	7	4
1	9	7

a) 123 + 75 =
b) 147 + 51 =
c) 182 + 16 =
d) 72 + 125 =
e) 135 + 62 =
f) 152 + 45 =
g) 191 + 6 =
h) 61 + 135 =
i) 112 + 77 =

Let us add numbers

a) 121 + 47 =
b) 138 + 40 =
c) 105 + 93 =
d) 104 + 55 =
e) 123 + 46 =
f) 154 + 30 =

1.5.2 Addition with carrying

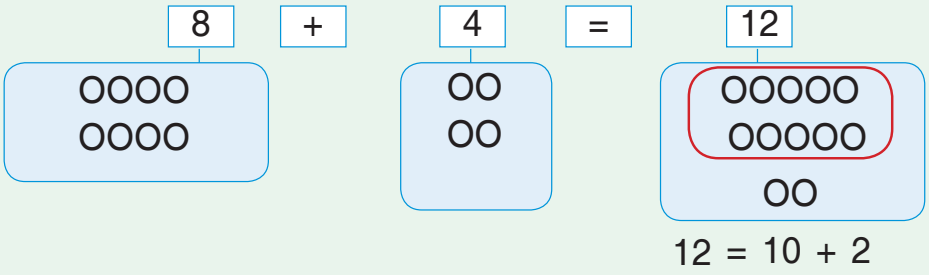
Activity 1.5.8

Refer to this example below and add the numbers that follow using the table of place values

Example: 134 + 28 =

Hundreds (H)	Tens (T)	Ones (O)
	(1)	
1	3	4
+ ↓	2	8
1	6	2

From the ones I have 8 + 4; Then I can use counters as follows:



12 = 10 + 2

4 + 8= 12. However, 12 = 10 + 2, I write 2 ones and carry 1 tens to the next digit of tens to the left as indicated in the table. Then I add tens and hundreds in the same way.

Let us add numbers

a) 125 + 67 =
b) 134 + 48 =
c) 146 + 29 =
d) 136 + 42 =
e) 104 + 64 =
f) 126 + 72 =
g) 117 + 75 =
h) 154 + 28 =
i) 165 + 28 =
j) 174 + 21 =
k) 156 + 39 =
l) 146 + 48 =
m) 171+ 28 =
n) 185+ 15 =
o) 192+ 8 =
p) 116 + 59 =
r) 123 + 48 =
s) 136 + 59 =

I have learnt that:

- When adding numbers, add downwards;
- Start from the place value of ones on your right;
- When the sum of two or more numbers is more than 9, write the ones and carry tens to the next digit of tens to the left;
- Then, add tens and hundreds in the same way.

The way of adding numbers downwards is called the **standard written method.**

Let us add numbers

a) 105 + 58 =
b) 77 + 96 =
c) 139 + 43 =
d) 85 + 46 =
e) 137 + 26 =
f) 88 + 45 =
g) 149 + 36 =
h) 73 + 49 =
i) 89 +27 =
j) 65 + 108 =
k) 34 + 98 =
l) 98 + 86 =

1.6 Word problems involving numbers whose sum does not exceed 200

Activity 1.6.1

Study the example below:

Example:

In the first week our school enrolled 123 new pupils. In the second week the school received other 54 new pupils. Find the total number of new pupils in this two weeks.

Solution:

Given:

In the first week: 123

In the second week: 54

Question: The total or the sum

Answer: 123 + 54 = 177.

The total number of new pupils in this two weeks is 177.

Note: To solve a problem, make up a number sentence from a given number story.

123 + 54 = 177 is a number sentence.

Solve the following problems:

1. During the quizze , Uwase got 120 marks in the first week. In the second week she got 40 marks. Find her total marks.
2. Hirwa bought 100 cobs of maize. His sister gave him 12 more cobs . How many cobs of maize are did he get altogether.
3. Kagabo has only 65 mathematics books and 95 books of Kinyarwanda. How many books does he have altogether.
4. A farmer planted 112 on Monday morning .85 trees in the afternoon how many trees did plant altogether.
5. There are 111 boys and 89 girls in P2. Find the total number of pupils for P2.
6. Uwamahoro has 142 hens. Nkusi has 32 hens. How many hens do they have altogether.
7. I have two Grand Fathers. The first has 74 cows. The second has 69 cows. How many cows do they have altogether.
8. On Monday, Mugabo sold 108 eggs. On Tuesday he sold 87 eggs. Find the total number of eggs sold in two days.
9. Kaneza has 137 female cows and 46 bulls. Find the total number of Kaneza's animals.

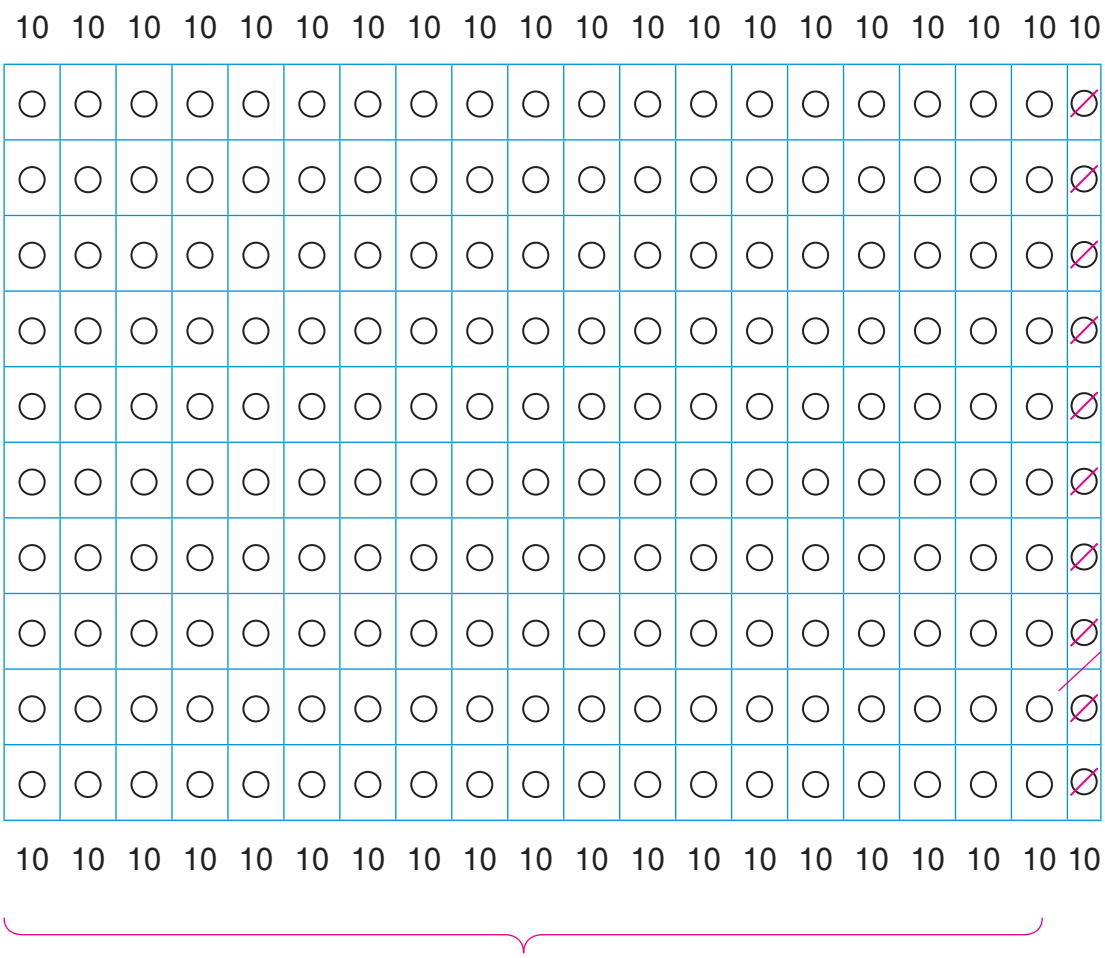
1.7 Subtraction within the range of 200

1.7.1 Mental work

Activity 1.7.1

study the example given in the the table below and answer the questions that follow on subtraction

200



190

Then, 200 – 10 = 190

a) 190 – 10 =
b) 180 – 10 =
c) 170 – 10 =
d) 160 – 10 =
e) 150 – 10 =
f) 140 – 10 =
g) 130 – 10 =
h) 120 – 10 =
i) 110 – 10 =
j) 100 – 10 =
k) 90 – 10 =
l) 80 – 10=

1.7.2 Subtraction without Borrowing

Activity 1.7.2

Get a collection of 125 counters From these 125 counters, take away 23 of them. Count the remaining counters and say their number.

Activity 1.7.3

Use your counters and fill in the missing number

a) 100 = ☐ – 24
b) 120 = ☐ – 58
c) 115 = ☐ – 40
d) 150 = 175 – ☐
e) 155 =195 – ☐
f) 130 = 178 – ☐
g) 187 – ☐ = 47
h) 166 – ☐ = 140
i) 174 – ☐ =124
j) ☐ – 78 = 120
k) ☐ – 36 = 162
l) ☐ – 125 = 52

Activity 1.7.4

Find the cards with ☐ - , ☐ = and the following number cards:

A	121	132	114	182	153	144
B	21	30	11	31	33	14
C	120	130	151	102	100	103

Use them to do the task below:

- Take one number card from A ;
- Next to it, put the card with ☐ - ;
- Continue with a number card from B;
- Put there the card with the sign ☐ =
- Then, select the answer from number cards for the group C.

Example: 121 — 21 = 100

Activity 1.7.5

Follow this example carefully and subtract the numbers that follow

Example: 174 — 23 = 151

	Hundreds (H)	Tens (T)	Ones (O)
	1	7	4
–	↓	2	3
	1	5	1

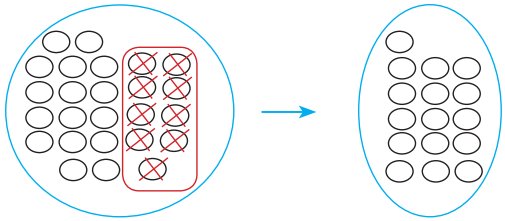
a) 186 – 75 =
b) 187 – 51 =
c) 189 – 16 =
d) 165 – 62 =
e) 156 – 45 =
f) 196 – 56 =
g) 189 – 77 =
h) 164 – 22 =
i) 193 – 131 =

1.7.3 Subtraction with Borrowing

Activity 1.7.6

Study the following examples of finding the answer for 25 - 9= ; in case 1 and case 2 and then learn to subtract numbers with borrowing.

Case 1:



25 - 9 = 16

Case 2:

Tens (T)	Ones (O)
1	
~~2~~	10 +5
–	9
1	6

- In ones, 5-9 is not possible because 5 is less than 9. We then borrow 1 from the next digit under the tens:
  2 tens – 1tens = 1 tens;
- For the ones, we find 10 + 5 = 15.
  Then 15-9 = 6
  For the tens, I remained with 1 tens.
  Bring 1 tens down.

The process of subtracting and borrowing can continue until the end.

Activity 1.7.7

Study this examples of finding the answer for 112 - 45 = by the use of the table of place values.

Example:

Hundreds (H)	Tens (T)	Ones (O)
0	10 + 0	
~~1~~	~~1~~	10 + 2
– ↓	4	5
0	6	7

Then, use the table of place values to answer to the following questions:

a) 152 – 47 =
b) 171 – 57 =
c) 196 – 72 =
d) 192 –164 =
e) 139 – 117 =
f) 143 – 48 =
g) 145 – 28 =
h) 131 – 129 =
i) 174 – 138 =
j) 178 – 139 =
k) 164 – 39 =
l) 165 – 58 =
m) 182 – 156 =
n) 129 – 76 =
o) 148–129 =

I have learnt that:

When subtracting numbers

- Start by ones
- When the number of ones for the first number is less than the one for the second number, you borrow one tens equivalent to 10 ones.
- Add 10 ones borrowed to the number of ones for the first number and subtract;
- Go to tens: subtract the number of tens for the second number from the remained number of tens for the first number.
- Continue the process on tens and hundreds as we did for ones until the end.

Now, let us carry out the subtraction

a)	105 – 58	=	d)	85 – 46 =		g)	146 – 39	=
b)	97 – 68	=	e)	136 – 27 =		h)	73 – 49	=
c)	193 – 34	=	f)	105 – 86 =		i)	87 – 29	=

1.8 Solve problems involving subtraction in real life situations

Activity 1.8.1

Discuss this example below:

Example:

In the meeting of parents at our school, 197 parents were present. If 88 were female. Find the number of male parents.

Solution:

The number of male parents who attended the meeting: **197-88=109**

The male parents who attended the meeting are **109.**

Note

To ask some one to subtract, you can ask him/her to : subtract, take away, minus, find the difference between, find how many left or what is left.

Solve the following problems:

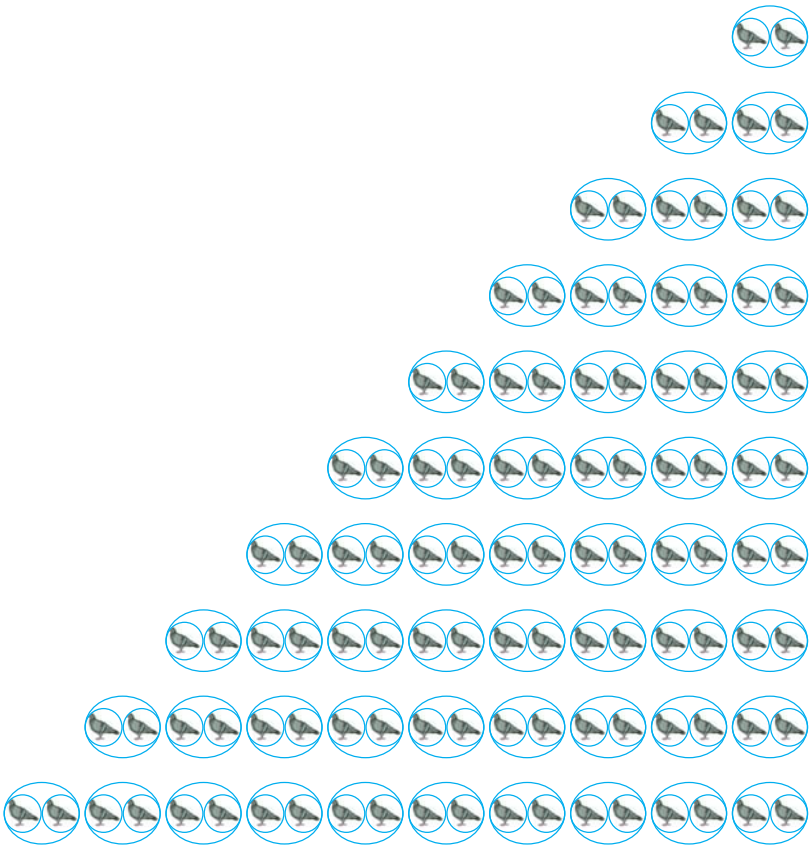
1. Our school has 200 cocks. If the headmaster sells 50 cocks, how many cocks will remain?
2. Uwera had 170 eggs. In this morning uwera sold 60 eggs. How many eggs left?
3. In the exam, Mugisha scored 156. If the pass mark is 200 marks. How many marks does he need to get the pass mark?
4. Shimwa produced 166 sacks of rice. Shema produced 187 sacks of rice. Find the difference between their sacks.
5. The family of Keza bought 178 cobs of maize. At the evening, they gave 69 cobs of maize to their visitors. How many cobs of maize were left?
6. Kayiranga took 195 pineapples to the market. People bought 139 pineapples only. How many pineapples did he bring back home?
7. Our village has 187 families. 149 families have cows, How many families do not have cows in our village?
8. Muhizi had 187 sacks of cement. If 39 sacks will be used during the construction of the walls of his house, how many sacks of cement will remain?
9. Bwiza Village has 172 families. If only 148 families of this village have health insurance , How many families of Bwiza village are not insured?

1.9 Multiplication of whole numbers by 2 and the multiples of 2

Activity 1.9.1

Form different groups of 2 counters and count the number of groups and the number of counters for those groups.

Do it in the following way: 1 group, 2 groups, 3 groups, 4 groups, 5 groups, 6 groups, 7 groups 8 groups, 9 groups and 10 groups. Write the number sentences of the following: The number of counters for 5 groups is ..., for 8 groups is..., etc.



2 X 1=2

2 X 2=4

2 X 3=6

2 X 4=8

2X 5=10

2X 6=12

2 X 7=14

2 X 8=16

2 X 9=18

2 X 10=20

Note

The multiplication by two looks like the repeated addition of twos

Activity 1.9.2

Fill in the missing numbers

a) 2=2 × ☐ d) 8= ☐ × 2 g) 14= 2 × ☐ j) 20= ☐ × 2

b) 4=2 × ☐ e) 10= 2 × ☐ h) 16= ☐ × 2

c) 6= 2 × ☐ f) 12= ☐ × 2 i) 18= 2 × ☐

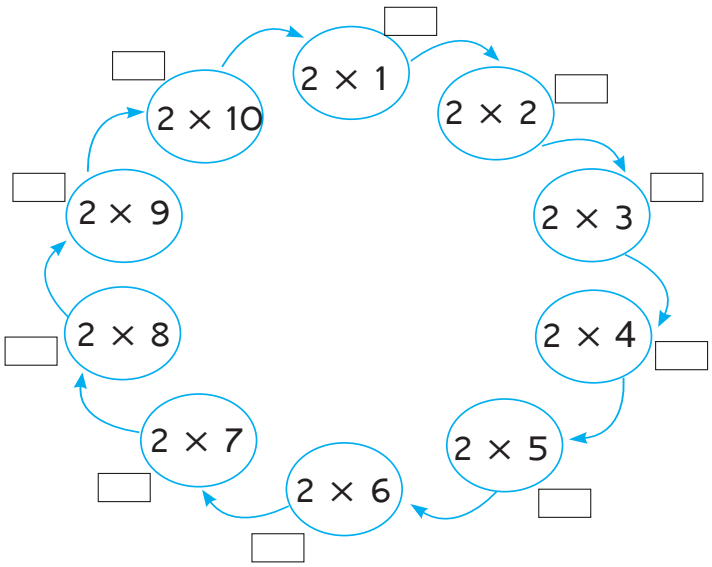
Now, let us carry out the multiplication by 2

1. Complete the multiplication table by 2.

a)

x2	0	1	2	3	4	5	6	7	8	9	10
	...	...	...	...	...	...	...	...	...	...	...

b)



2. Fill in the missing number in the multiplication table

c)

x2	0	...	2	...	4	...	6	...	8	...	10	÷2
	...	2	...	6	...	10	...	14	...	18	...	

3. Fill in the empty box with <, > or =

a) 10+10 ☐ 2 x 10

b) 5 + 5 ☐ 2 x 5

c) 9 + 9 ☐ 2 x 9

d) 4 + 4 ☐ 2 x 4

e) 8 + 8 ☐ 2 x 8

f) 3 + 3 ☐ 2 x 3

1.10 Multiply a two-digit number by 2

Activity 1.10 .1

Study this example and find the answer by using the table of place values.

Example: **10 x 2 =**

Tens (T)	Ones (O)
1	0
X	2
2	0

Then, 10 x 2 = 20

Find the answer by using the table of place values:

a) 2 x 11 = d) 2 x 14 = g) 2 x 22 = j) 2 x 31 =

b) 2 x 12 = e) 2 x 20 = h) 2 x 23 = k) 2 x 32 =

c) 2 x 13 = f) 2 x 21 = i) 2 x 30 = l) 2 x 33 =

I have learnt that:

1. When you multiply, start by multiplying ones and then multiply tens.
2. Read number sentence, 40 x 2 = 80 as "forty times two equals eighty" or "forty multiplied by two is equal to eighty".

1.11 Word problems involving the multiplication by 2

Activity 1.11

Study the example below:

Example:

There were **42** desks in the meeting room. If **2** people sit on each desk, what is the number of people in the meeting.

Solution:

The number of people : 42 x 2 = 84

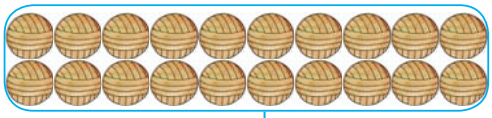
The number of people is 84.

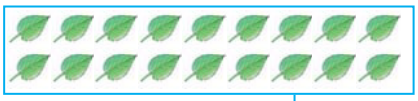
1. In the class of 30 pupils, every pupil brings 2 bottles of water. Find the total number of bottles of water brought by the pupils.
2. 34 pupils went carrying cabbages and every pupil carries 2 cabbages. How many cabbages did they carry altogether?
3. The main road of Remera has 33 lamps on every side. If the road has two sides, How many lamps are along Remera road?

1.12 Division without a Remainder of a two or three-digit number by 2

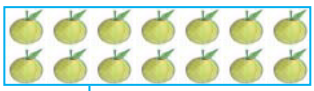
Activity 1.12.1

Count the number of objects you have. Group them equally in 2 groups. Count and write down the number of objects for each group.

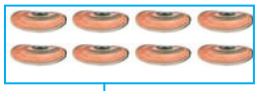
a)  ☐ ÷2 = ☐

b)  ☐ ÷2 = ☐

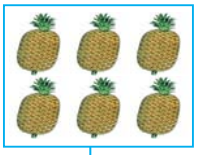
c)  ☐ ÷2 = ☐

d)  ☐ ÷2 = ☐

e)  ☐ ÷2 = ☐

e)  ☐ ÷2 = ☐

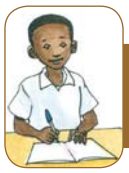
f)  ☐ ÷2 = ☐

g)  ☐ ÷2 = ☐

Activity 1.12.2

Study this example and fill in the division able

÷2	2	4	6	8	10	12	14	16	18	20
	1	...	...	...	5	...	...	...	...	...



Now, let us carry out the division of a number by 2

1. Find the answer

a) 20 ÷ 2 = d) 14 ÷ 2 = g) 8 ÷ 2 = j) 2 ÷ 2 =

b) 18 ÷ 2 = e) 12 ÷ 2 = h) 6 ÷ 2 = k) .. ÷ 2 = 3

c) 16 ÷ 2 = f) 10 ÷ 2 = i) 4 ÷ 2 = l) .. ÷ 2 = 7

2. Fill in the missing number

a) ☐ ÷ 2 = 7 e) ☐ ÷ 2 = 3

b) ☐ ÷ 2 = 9 f) ☐ ÷ 2 = 2

c) ☐ ÷ 2 = 5 g) ☐ ÷ 2 = 6

d) ☐ ÷ 2 = 8 h) ☐ ÷ 2 = 4

I have learnt that:

1. The division helps us to share equally objects between 2 people or to form two groups of equal number of objects.
2. Read number sentence, 24 ÷ 2 = 12 as "twenty-four divided by two equals 12" or "twenty-four divided by two is equal to twelve".

Activity 1.12.3

1. Study this example of dividing 64 by 2 using a standard written method:

Example :

64 ÷ 2 = **32**

$$\begin{array}{r} 3\,2 \\ 2\overline{)\,6\,4} \\ -\,6 \\ \hline 0\,4 \\ -\quad 4 \\ \hline 0\,0 \end{array}$$

Explanation:

Tens (T)	Ones (O)
6 ÷ 2 = 3	4 ÷ 2 = 2

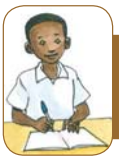
60 ÷ 2= 30

Refer to the example above and divide a two-digit number by 2 using a standard written method

a) $2\overline{)22}$ d) $2\overline{)26}$ g) $2\overline{)28}$ j) $2\overline{)86}$

b) $2\overline{)88}$ e) $2\overline{)78}$ h) $2\overline{)24}$ k) $2\overline{)96}$

c) $2\overline{)38}$ f) $2\overline{)76}$ i) $2\overline{)98}$ l) $2\overline{)52}$



Let us carry out the division of a number by 2 using a standard written method

a) 48 ÷ 2 = f) 68 ÷ 2 = k) 44 ÷ 2 =

b) 60 ÷ 2 = g) 80 ÷ 2 = l) 20 ÷ 2 =

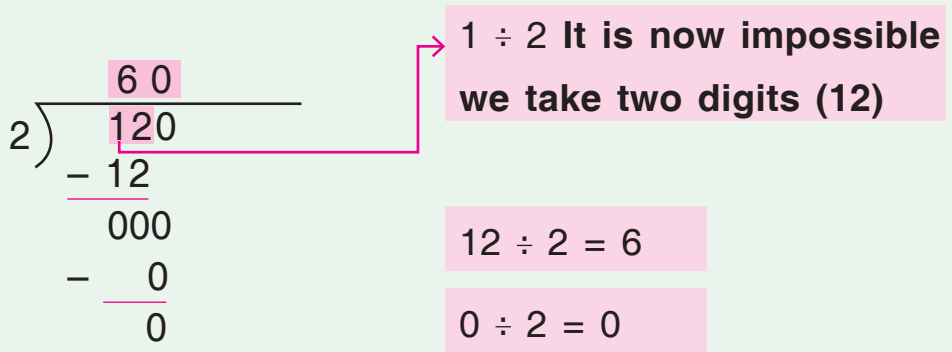
c) 62 ÷ 2 = h) 82 ÷ 2 = m) 40 ÷ 2 =

d) 64 ÷ 2 = i) 42 ÷ 2 = n) 22 ÷ 2 =

e) 66 ÷ 2 = j) 46 ÷ 2 = o) 84 ÷ 2 =

2. Study this example of dividing 120 by 2 using a standard written method:

Example:



Study to the example above and divide a three-digit number by 2 using a standard written method

a) 200 ÷ 2 =
b) 188 ÷ 2 =
c) 186 ÷ 2 =
d) 184 ÷ 2 =
e) 182 ÷ 2 =
f) 180 ÷ 2 =
g) 168 ÷ 2 =
h) 166 ÷ 2 =
i) 164 ÷ 2 =

I have learnt:

1. When dividing a number using a standard written method, you start by the left side considering hundreds (when it is a three digit number) or tens (when it is a two-digit number);
2. When the first digit is not divisible by 2, consider also the second digit and deal with a two digit number.

1.13 Word problems involving the division of a number by 2

Follow this example below:

Example:

If the sector shares 148 books between 2 schools equally. How many books will each school get?

Solution:

The number of books for each school: 148 ÷ 2 = 74

The number of books for each school is 74.

Then solve the following problens:

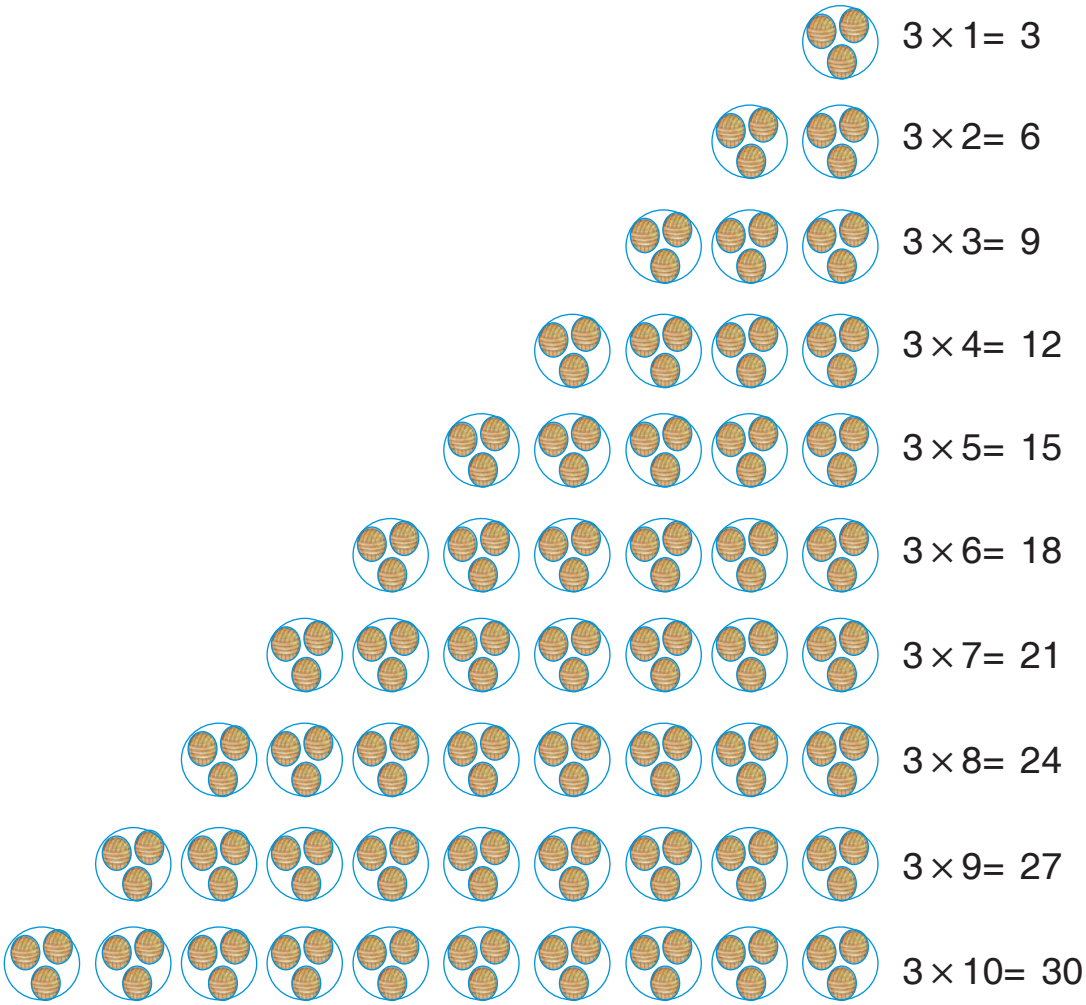
1. Share equally 48 notebooks between 2 pupils. How many notebooks will you give to each pupil?
2. On my birthday, we arranged chairs in two columns. If the total number of chairs is 100. Find the number of chairs for each column.

1.14 Multiplication of whole numbers by 3 and the multiples of 3

Activity 1.14.1

Form different groups of 3 counters and count the number of groups and the number of counters for those groups.
Do it in the following way: 1 group, 2 groups, 3 groups, 4 groups, 5 groups, 6 groups, 7 groups 8 groups, 9 groups and 10 groups.

Write the number sentences of the following: The number of counters for 3 groups is ... The number of counters for 5 groups is ..., The number of counters for 8 groups is..., etc.



Note

The multiplication by 3 looks like the repeated addition of threes

Activity 1.14.2

Fill in the missing numbers

a) 3= ☐ × 3 d) 12= 3 × ☐ g) 21= ☐ × 3

b) 6= 3 × ☐ e) 15= ☐ × 3 h) 24= 3 × ☐

c) 9= ☐ × 3 f) 18= 3 × ☐ i) 27= ☐ × 3

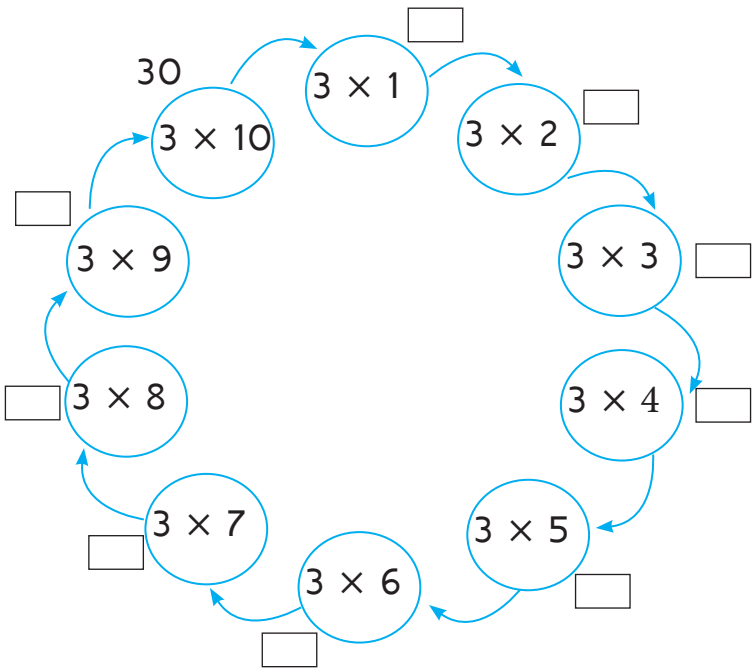
Let us carry out the multiplication of a number by 3

1. Complete the multiplication table by 3

a)

×3	1	2	3	4	5	6	7	8	9	10
	...	...	...	...	...	...	...	...	...	...

b)



2. Fill in the missing number in the multiplication or division table.

×3	0	...	2	...	4	...	6	...	8	...	10	÷3
	...	3	...	9	...	15	...	21	...	27	...	

3. Fill in the box using <, > or = to compare numbers

a) 10+10+10 ☐ 3 x 10

b) 5 + 5+ 5 ☐ 3 x 5

c) 9 + 9+ 9 ☐ 3 x 9

d) 4 +4 +4 ☐ 3 x 4

e) 8 +8 +8 ☐ 3 x 8

f) 3 +3 + 3 ☐ 3 x 3

1.15 Multiply a two-digit number by 3

Activity 1.15 .1

Study this example and find the answer by using the table of place values.

Example:

Tens (T)	Ones (O)
1	0
X	3
3	0

Then, 10 X 3 = 30

Find the answer by using the table of place values:

a) 3 x 11 = d) 3 x 20 = g) 3 x 23 = j) 3 x 32 =

b) 3 x 12 = e) 3 x 21 = h) 3 x 30 = k) 3 x 33 =

c) 3 x 13 = f) 3 x 22 = i) 3 x 31 = l) 3 x 41 =

I have learnt:

1. When you multiply, start by multiplying ones and then multiply tens.
2. Read number sentence, 40 x 3 = 120 as "forty times three equals one hundred twenty" or "forty multiplied by three is equal to one hundred twenty".

Activity 1.15 .2

Study this example of multiplying a two digit number by 3 using the standard written method.

Example: 31× 3 =

$$\begin{array}{r} 3\ 1 \\ \times\ \ 3 \\ \hline 9\ 3 \end{array}$$

Explanation:

Ones: 1× 3 = 3;
Tens: 3 × 3 = 9;
Then, 31 × 3 = 93

Follow the example and find the answer:

a) 21 ×3

b) 22 ×3

c) 23 ×3

d) 30 ×3

e) 41 × 3

f) 32 × 3

g) 33 × 3

h) 40 × 3

1.16 Word problems involving the multiplication by 3

Activity 1.16

Study this example carefully:

Example:

When planting trees, every pupil planted 3 trees.
Determine the number of trees planted by 51pupils?

Solution:

The number of trees planted by 51 pupils: 3 × 51 = 153

The number of trees planted by 51 pupils is 153.

$$\begin{array}{r} 51 \\ \times\ 3 \\ \hline 153 \end{array}$$

Work out the following problems:

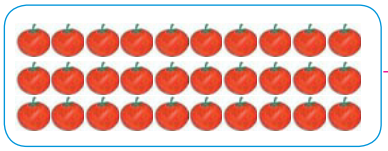
1. The school has 3 classrooms. Every class has 33 girls and 32 boys. Find the total number of pupils in school.
2. In the first term I got 60 marks. If I got the same marks in the second and the third term, Find my marks at the end of the year.
3. Butera bought 3 boxes of soap. Every box contains 32 bars of soap. Find the total number of bars of soap in 3 boxes.

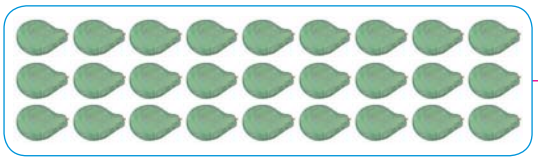
4. Our garden has 3 lines of flowers. If each line has 23 flowers, what is the total number for all flowers of the garden?
5. Kamariza's hens lay 40 eggs per day. How many eggs will the hens lay in 3 days?
6. In our church people sit in 3 columns. Every column has 43 people. Find the total number of people who sit in the church?

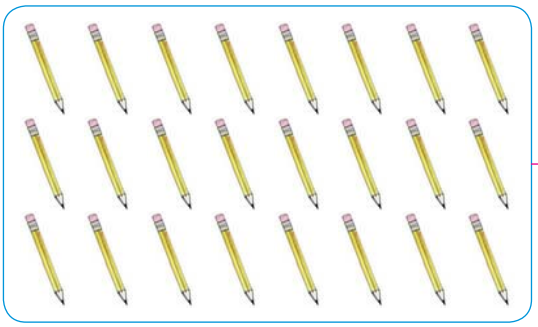
1.17 Division without a Remainder of a two or three-digit number by 3

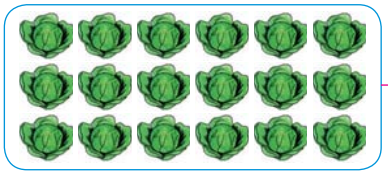
Activity 1.17.1

Count the number of objects you have. Write their number. Group them equally in 3 groups. Count and write down the number of objects for each group.









$\square \div 3 = \square$

$\square \div 3 = \square$

Activity 1.17.2

Study this example and complete the following multiplication or division tables

÷ 3	3	6	9	12	15	18	21	24	27	30	×3
	...	...	...	...	...	...	...	...	...	...	

÷ 3	3	...	9	...	15	...	21	...	27	...	×3
	...	2	...	4	...	6	...	8	...	10	

÷ 3	...	6	...	12	...	18	...	24	...	30	×3
	1	...	3	...	5	...	7	...	9	...	

I have learnt that:

1. The division helps us to share equally objects to 3 people or to form three groups of equal number of objects.
2. Read number sentence, 24 ÷ 3 = 8 as "twenty-four divided by three equals 8" or "twenty-four divided by three is equal to eight".

Activity 1.17.3

1) Study this example of dividing 126 by 3 using a standard written method:

Example:

$$\begin{array}{r} 42 \\ 3\overline{)\,126} \\ -\,12 \\ \hline 006 \\ -\,6 \\ \hline 0 \end{array}$$

1 ÷ 3 It is impossible
we take two digits (12)

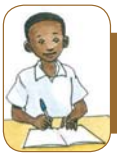
12 ÷ 3 = 4

copy down 6

6 ÷ 3 = 2

Follow the example above and divide a two-digit number by 3 using a standard written method

a) $3\overline{)189}$ b) $3\overline{)156}$ c) $3\overline{)123}$ d) $3\overline{)159}$



Let us carry out the division of a number by 3 using a standard written method

a) 123 ÷ 3 = d) 150 ÷ 3 = g) 180 ÷ 3 = j) 186 ÷ 3 =
b) 126 ÷ 3 = e) 156 ÷ 3 = h) 183 ÷ 3 = k) 189 ÷ 3 =
c) 129 ÷ 3 = f) 159 ÷ 3 = i) 153 ÷ 3 = l) 192 ÷ 3 =

I have learnt that:

1. When dividing a number using a standard written method, you start by the left side considering hundreds (when it is a three digit number) or tens (when it is a two-digit number);
2. When the first digit is not divisible by 3, consider also the second digit and deal with a two digit number.

1.18 Word problems involving the division of a number by 3

Activity 1.18

Follow this example carefully :

Example:

The District received a gift of **189** laptops. These laptopts will be equally shared among **3** schools. How many laptops will each school get ?

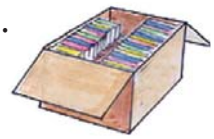
Solution:

Laptops to be shared to each school: 189 ÷ 3 = 63

The number of Laptops to be shared to each school is 63.

Solve the following problens:

1. Our school has 36 notebooks to be given to 3 pupils who passed well the Primary Leaving Examination. If notebooks will be shared equally, Find the number of notebooks to be given to each pupil.
2. In our school we planted 69 flowers on 3 lines. If the lines have the same number of flowers, Find the total number of flowers planted.
3. The head teacher of our school has 186 textbooks. He wants to share them equally to 3 classes. How many books will he give to each class ?



4. The health Center in our village has 159 mosquito nets to be shared equally among 3 villages . How many mosquito nets will each village get ?
5. The hens for Butera layed 180 eggs in 3 days. If they lay the same number of eggs per day, How many eggs do they lay in one day ?

END UNIT ASSESSMENT 1

1. Write in words or in figures

(a) 187: (b) One hundred ninety seven :

2. Write the number

(a) 7Ones 1Hundreds 5Tens =

(b) 5Ones 1Hundreds 7Tens =

3. Find the number that was expanded

(a) $(1 \times 100) + (3 \times 10) + (1 \times 9) =$

(b) $100 + 80 + 3 =$

4. Tell the place value for the digit underlined.

(a) $\underline{1}86$ (b) $1\underline{4}7$ (c) $\underline{1}34$ (d) $12\underline{5}$

5. Use <, > and = to compare these numbers =

(a) 195 ☐ 159 (b) 171 ☐ 168 (c) 186 ☐ 186

6. Arrange the following numbers in ascending order.

179, 189, 198, 187, 178, 197

7. Arrange the following numbers in descending order.

198, 187, 178, 107, 189, 199

8. Work out the following

(a) 143 + 53 = (b) 87 + 108 =

(c) 75 + 118 = (d) 166 + 33 =

9. Find the difference :

(a) 195 – 172 = (b) 167 – 136 =

(c) 151 – 109 = (d) 132 – 78 =

10. Complete the following multiplication tables

× 2											
	0	...	2	...	4	...	6	...	8	...	10
	...	2	...	6	...	10	...	14	...	18	...

× 3											
	...	1	...	3	...	5	...	7	...	9	...
	0	...	6	...	12	...	18	...	24	...	30

11. Carry out the product

(a) $\begin{array}{r} 43 \\ \times\ 2 \\ \hline \end{array}$ (b) $\begin{array}{r} 23 \\ \times\ 3 \\ \hline \end{array}$ (c) $\begin{array}{r} 34 \\ \times\ 2 \\ \hline \end{array}$ (d) $\begin{array}{r} 32 \\ \times\ 2 \\ \hline \end{array}$

12. Fill in the missing numbers in the following multiplication tables

× 2										
	0	...	4	...	8	...	12	...	16	...	20
	...	1	...	3	...	5	...	7	...	9	...

×3										
	...	3	...	9	...	15	...	21	...	27	...
	0	...	2	...	4	...	6	...	8	...	10

13. Work out the following divisions

(a) 86 ÷ 2 = (b) 159 ÷ 3 = (c) 180 ÷ 2 =

(d) 126 ÷ 3 = (e) 168 ÷ 2 = (f) 126 ÷ 3 =

14. Word problems

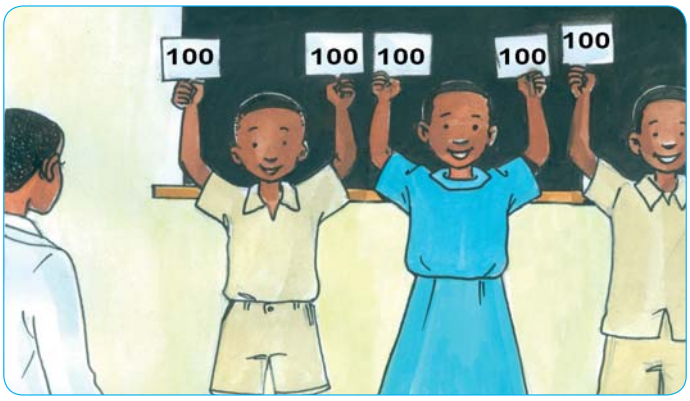
a. Gisa has 97 cows; his sister Keza has 98 cows. How many cows do they have altogether?
b. Butera had 159 bananas; he sold 98 bananas of them. How many bananas remained?
c. Kaneza has 2 boxes of biscuits. There are 64 biscuits in each box. How many biscuits does Kaneza have?
d. Yesterday we received 62 visitors. Every visitor took 3 bottles of soda. How many bottles of soda did we give them altogether?
e. Our Head teacher shared 198 books among 3 classes. How many books did each classroom get?
f. Kaliza plants 94 trees every year. Find the number of trees he plants in two years.
g. Ngarambe ito fetches 11 jerry cans of water every day. How many jerry cans will he fetch in 3 days?
h. Jabo has 196 cows. He wants to share them equally between his 2 children. How many cows can each child get?
i. There are 94 notebooks in each box. How many notebooks are in 2 boxes?

Unit 2 Whole numbers from 0 up to 500

2.1 Count, read and write whole numbers from 0 up to 500

Activity 2.1.1

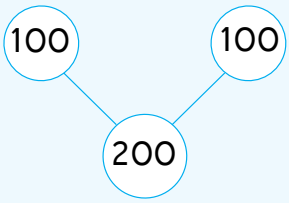
Study the picture and tell your friend the numbers you have see on it



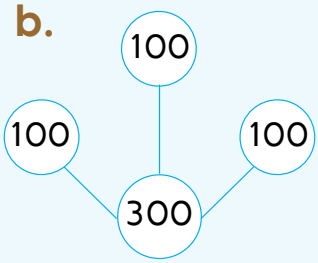
Activity 2.1.2

Read loudly numbers on a), b), c) and d) using number names

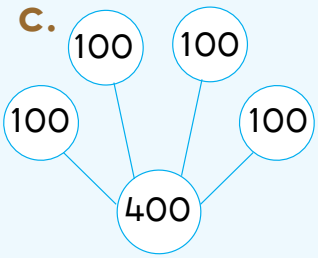
a.



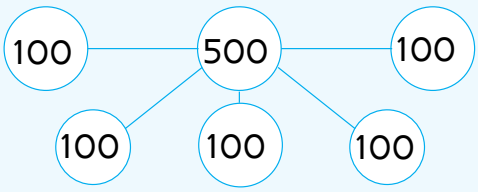
b.



c.

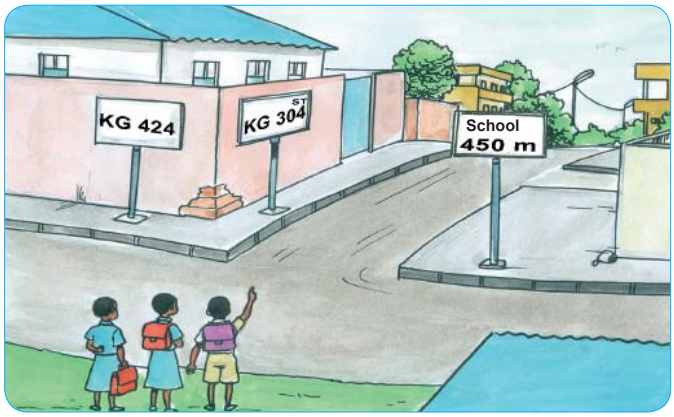


d.



Activity 2.1.3

Read numbers you see on the sign posts



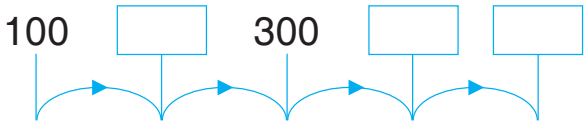
Activity 2.1.4

Study the following numbers and read them in a loud voice

200	210	220	230	240	250	260	270	280	290	300
300	310	320	330	340	350	360	370	380	390	400
400	410	420	430	440	450	460	470	480	490	500

Activity 2.1.5

Count in hundreds and complete the following number line



Activity 2.1.6

Fill in the missing numbers

200	201				205					
210							217			
220										230
230										

240									240	
250		252								
260						266				
270										
280				284						
290										300
300	301									
310					315					
320									329	
330			333							
340										
350										
360				364						
370										
380		382								
390							397			400
400	401									
410										
420									429	
430						436				
440										
450						456				
460					465					
470		472								
480				484						
490										500

Activity 2.1.7

Fill in the missing numbers

200	201	202	....	...	...	...	207	...	...	...
240	...	....	....	...	...	...	.....	...	...	...
260	...	....	....	....	...	...	....	...	...	...
290	291	....	....	....	...	...	.....	...	...	...
320	...	....	....	....	...	...	.....	...	...	...
350	...	....	....	....	...	...	.....	...	...	...
370	...	....	....	374	...	...	.....	...	...	...
480	...	....	....	....	...	...	.....	...	...	...
490	...	....	493	....	...	...	.....	...	...	500

Activity 2.1.8

You have a container with number cards for the following numbers: 242, 318, 425, 499 and 384. Pick randomly one number card from the container and tell your collegue the number you have picked.

Activity 2.1.9

Take 10 number cards with successive numbers between 200 and 500. Arrange them from the smallest to largest.

Activity 2.1.10

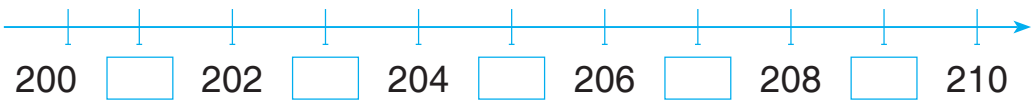
Study the following pictures. What do you see ?

Using your own number cards, arrange numbers from 200 up to 500.

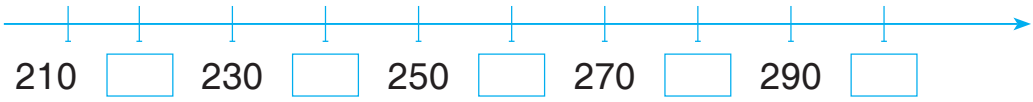
Activity 2.1.11

Fill in the missing numbers on the following number lines:

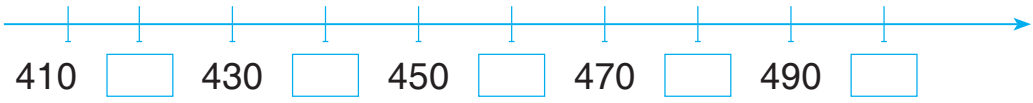
a)



b)



c)



Activity 2.1.12

Fill in the missing numbers on the following number lines.

a. 200 220 280 380

b. 310 330 350 370 390

c. 305 315 335 355 375 395

Activity 2.1.13

Write numbers in words:

a) From 200 up to 205
b) From 265 up to 270
c) From 295 up to 300
d) From 345 up to 350
e) From 360 up to 365
f) From 471 to 490

Activity 2.1.14

Read and write these numbers in figures.

a) Two hundred eighty
b) Four hundred and thirty
c) Three hundred and five.

Activity 2.1.15

Read and write these numbers in words

a) 325: b) 175: c) 298:

Activity 2.1.16

Work in pairs and fill in the missing numbers in the table below

200					250					300
400										300
500										400
300			330							400
200	205									250
390					440					490
320		340								420
400				440						500

2.2 Place values of numbers from 0 up to 500

Activity 2.2.1

Use the example and write the numbers that follow in the table of place values

Example: **235**

Hundreds (H)	Tens (T)	Ones (O)
2	3	5

a) 235 d) 267 g) 469 j) 347 m)492

b) 228 e) 378 h) 427 k) 439 n) 393

c) 445 f) 484 i) 298 l)349 o) 313

Activity 2.2.2

Use the table of place values to group numbers into hundreds (H), tens (T) and ones (O).

a) 231 =... H ...T...O
b) 214 =... H ...T...O
c) 315 =... H ...T...O
d) 461 =... H ...T...O
e) 417 =... H ...T...O
f) 368 =... H ...T...O

Activity 2.2.3

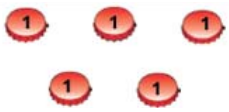
1) Write down these numbers that were grouped into hundreds (H), tens (T) and ones (O).

a) 1Tens 4Ones 2Hundreds =
b) 2Ones 3Hundreds 6Tens =
c) 4 hundreds 6Ones 7 tens =
d) 4Tens 7Ones 2Hundreds =
e) 5Ones 8Tens 3Hundreds =
f) 6Tens 8 Ones 2Hundreds =
g) 3Hundreds 0 Ones 9Tens =
h) 8 Ones 4Hundreds 0Tens =
i) 3Hundreds 2 Ones 0 Tens =

2) Use the abacus, Cuisenaire rods or multi-based blocks to represent the number by hundreds (H), tens (T) and ones (O).

Example:

Use bottle tops (green for hundreds, blue for tens and red for ones) to fill the table below: (You can put the bottle tops on top of each other to fit them in.)

	Hundreds (H)	Tens (T)	Ones (O)
165			
475			

2.3 Comparing numbers from 0 up to 500

Activity 2.3.1

Get number cards and compare numbers using **<**, greater than **>** or equal to **=**

Example:

203 < 401

Fill in correctly using < > or =
Say why you use that symbol

a) 315 ___ 235

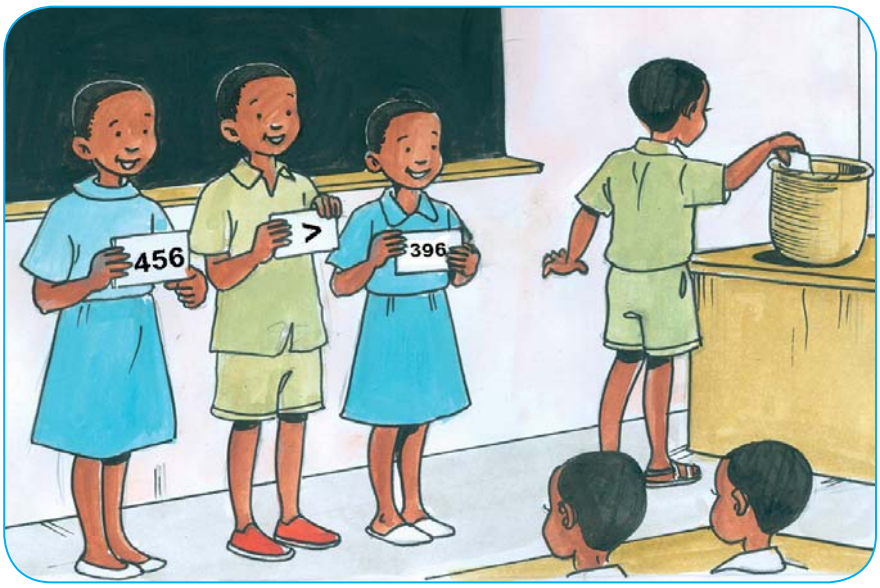
b) 388 ___ 381

c) 479 ___ 479

d) 393 ___ 500

Activity 2.3.2

Choose number cards randomly one after the other from a container.



Put them on a table and use cards symbol <, > or = to compare the numbers.

Activity 2.3.3

Read and compare pupils' marks

In the second term, P2 pupils worked out of 500 marks. Butera got 351, Mutoni got 473, Kabarisa got 380, Uwase got 390 and Mukayiranga got 429.

Compare marks for two pupils and say who got more or less marks.

a) Kabarisa and Mutoni
b) Butera and Kabarisa
c) Uwase and Mutoni
d) Butera and Mutoni
e) Uwase and Kabarisa
f) Uwase and Butera
g) Kabarisa and Mukayiranga
h) Mukayiranga and Butera
i) Uwase and Mukayiranga
j) Mukayiranga and Mutoni

Activity 2.3.4

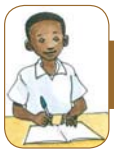
Study the pictures showing the harvest of carottes for different classes

The number of carrots produced by each class is given in this table:

Class	P1	P2	P3	P4	P5	P6
Number of cabbages produced	158	261	356	398	434	497

Compare the harvest for the following classes:

a) P1 and P3
b) P2 and P3
c) P3 and P4
d) P4 and P5
e) P5 and P6
f) P2 and P5
g) P6 and P1
h) P4 and P2
i) P5 and P3



I can use <, > and = to compare numbers

a) 469 ☐ 469
b) 336 ☐ 467
c) 363 ☐ 431
d) 490 ☐ 404
e) 318 ☐ 285
f) 445 ☐ 358
g) 222 ☐ 222
h) 301 ☐ 301
i) 427 ☐ 327
j) 254 ☐ 349
k) 281 ☐ 313
l) 429 ☐ 392

2.4 Arrange numbers within 500 in ascending or descending order

2.4.1 Arrange numbers from the smallest to the largest.

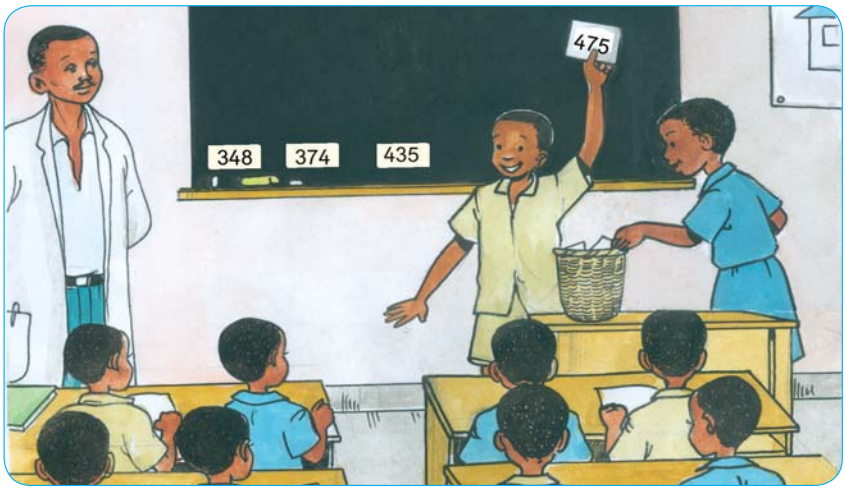
Activity 2.4.1

Form groups of counters of the following numbers: 230, 200, 350, 300, 499 and 400 .
Count them and arrange these groups from the smallest number to the largest number.

Explain how you did it.

Activity 2.4.2

Get the number cards and arrange them from the smallest to the largest .



Activity 2.4.3

Arrange the following numbers from the smallest to the largest

a) 425, 475, 303
b) 335, 284, 400
c) 497, 500, 251
d) 345, 482, 223
e) 242, 473, 365
f) 409, 499, 337
g) 247, 479, 352
h) 428, 500. 268
i) 394, 421, 275
j) 306, 360, 301
k) 415, 451,154
l) 226, 262, 215
m) 325, 305, 352
n) 476, 467,267
o) 329, 293, 392
p) 286, 268, 382
r) 374, 473, 347
s) 429, 249, 492

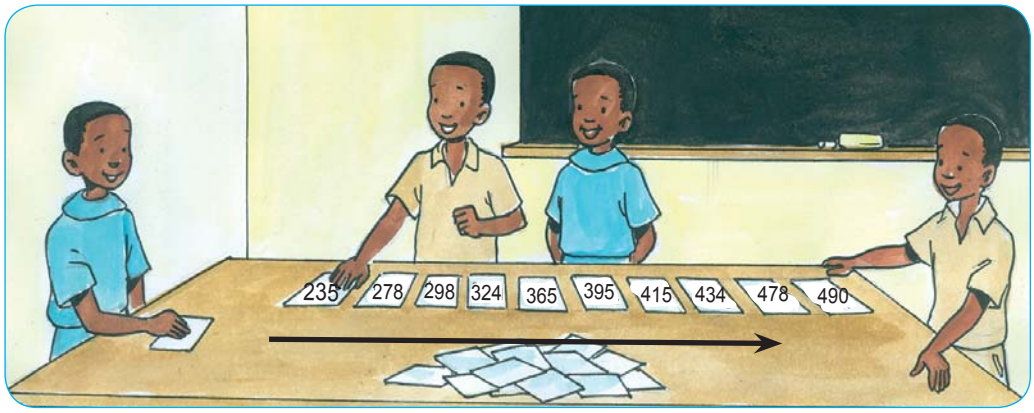
2.4.2 Arranging numbers from the largest to the smallest.

Activity 2.4.3

Form groups of counters of the following numbers: 235, 274, 315, 472, and 499. Count them and arrange these groups from the largest number to the smallest number.

Activity 2.4.4

Study the number cards on the following pictures:
How are these numbers arranged?



Do the same and arrange your number cards from the largest to the smallest number.

I arrange numbers

Arrange the following numbers from the largest to the smallest number

a) 252, 475, 330
b) 453, 248, 500
c) 479, 500, 315
d) 254, 328, 432
e) 424, 256, 337
f) 390, 299, 473

2.5 Addition of numbers whose sum does not exceed 500

2.5.1 Mental calculation

Activity 2.5.1

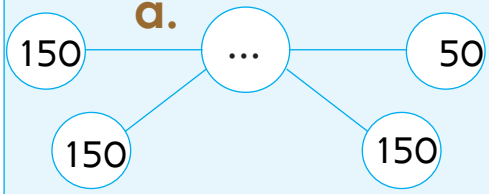
Think and give the sum of these numbers (Mental work)

a) 200 + 50 =
b) 200 + 20 =
c) 220 + 30 =
d) 250 + 50 =
e) 300 + 50 =
f) 350 + 50 =
g) 400 + 50 =
h) 450 + 50 =
i) 300 + 80 =

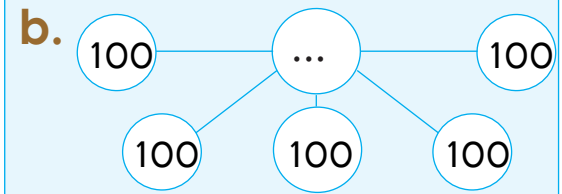
Activity 2.5.2

Add and write the answer in the correct circle

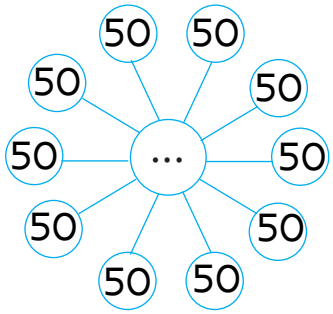
a.



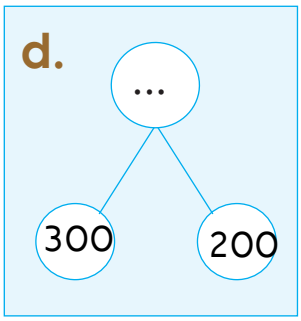
b.



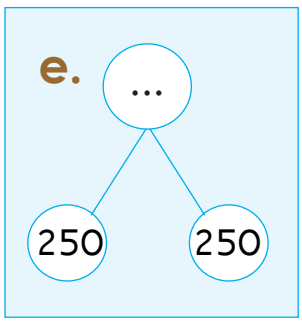
c.



d.



e.

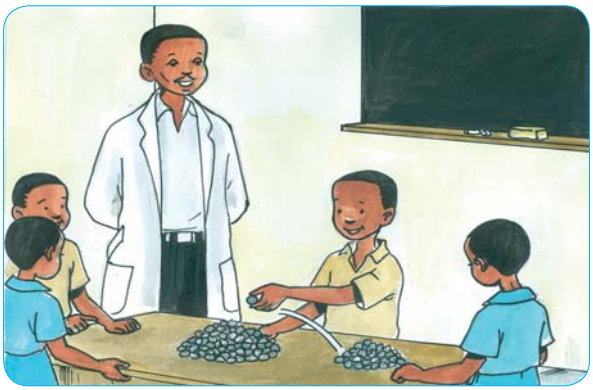


2.5.2 Addition without carrying

Activity 2.5.3

Study the pictures carefully.

Tell the activity taking place in the pictures below



Activity 2.5.4

Form two groups of counters: the first group contains 225 counters, the second group contains 163 counters. Combine the two groups and find the total number of these counters.

Activity 2.5.5

Use the counting materials, count and find the missing number

a) 201+ ☐ = 442

b) 123+ ☐ = 378

c) ☐ = 120 +366

d) 63 + ☐ = 364

e) 203 + ☐ = 456

f) ☐ = 200 + 138

Activity 2.5.6

Use the following number cards and cards with + , and = and do the task below:

A. 221 214 253 262 281 235

B.	97	245	154	121	212	234
C.	318	469	407	383	459	493

- Take one number card from A ;
- Continue with the card [+].
- Continue with a number card from B;.
- Put there the card with the sign [=].
- Then, select the answer from number cards for the group C.

Example: 221 + 97 = 318

Activity 2.5.7

Study the example below and work out the addition correctly

Example: 223 + 274 = 497

Hundreds (H)	Tens (T)	Ones (O)
2	2	3
+ 2	7	4
4	9	7

a) 223 + 175 =
b) 335 + 162 =
c) 312 + 177 =
d) 247 + 251 =
e) 352 + 145 =
f) 264 + 225 =
g) 382 + 116 =
h) 291 + 206 =
i) 315 + 181 =
j) 272 + 225 =
k) 361 + 135 =
l) 226 + 272 =

2.5.3 Addition with carrying

Activity 2.5.8

Study the example below and use the table of place values to add numbers correctly

Example: 268 + 154 = 422

Hundreds (H)	Tens (T)	Ones (O)
1	1	
2	6	8
+ 1	5	4
4	2	2

a) 225 + 167 =
b) 334 + 148 =
c) 146 + 229 =
d) 117 + 375 =
e) 154 + 228 =
f) 265 + 228 =
g) 372+ 128 =
h) 185+ 315 =
i) 192+ 278 =

I have learnt that:

- When adding numbers, add downwards;
- Start from the place of ones on your right;
- When the sum of two or more numbers is more than 9, write the ones for the sum of ones;
- Carry the tens for this sum to the next digit of tens to the left;
- Then, add tens and hundreds in the same way.

Let us add numbers

a) 205 + 258 =
b) 277+ 196 =
c) 339 +1 43 =
d) 285+146 =
e) 337 + 126 =
f) 288 + 145 =
g) 149 + 336 =
h) 273 + 149 =
i) 189 +227 =

a) 125 + 67 =
b) 134 + 48 =
c) 146 + 29 =
d) 136 + 42 =
e) 104 + 64 =
f) 126 + 145 =
g) 117 + 75 =
h) 154 + 28 =
i) 165 + 28 =
j) 174 + 21 =
k) 156 + 39 =
l) 146 + 48 =
m) 117 + 28 =
n) 185 + 15 =
o) 192 + 8 =
p) 116 + 59 =
r) 123 + 48 =
s) 136 + 59 =

2.6 Word problems involving the addition of numbers whose highest sum is 500

Study the example below and solve question 1 and question 2

Example:

Nahimana got 225 marks in the first term. In the second term he got 215 marks. Find the total marks she got in two terms.

Solution

The total marks for Nahimana: 225 + 215 = 440

The total marks for Nahimana is 440.

Questions:

1. Today the school leader buys **265** books for Mathematics and **19** books for Kinyarwanda. How many books does he buy altogether?
2. Kanyinya Village planted **312** trees during Umuganda. Kinyinya Village also planted **188** trees. How many trees were planted altogether?

2.7 Subtraction of numbers within the range of 500

2.7.1 Mental calculation

Activity 2.7.1

Think and give the answer

a) 500 - 50 =	e) 100 - 50 =	i) 250 - 50 =
b) 400 - 50 =	f) 50 - 50 =	j) 150 - 50 =
c) 300 - 50 =	g) 450- 50 =	k) 500 - 100 =
d) 200 - 50 =	h) 350 - 50 =	l) 400 - 100 =

2.7. 2 Subtraction without borrowing

Activity 2.7.2

Study the pictures below and discuss the activity in the picture

Activity 2.7.3

Get a collection of 345 counters. take away 132 of them, then count the remaining counters and say the answer.

Activity 2.7.4

Take he cards with [-], [=] and the following number cards:

a.	324	232	414	282	353	444
b.	221	130	314	231	233	314
c.	100	120	130	103	51	102

Use them to do the task below:

- Take one number card from A ;
- Next to it, put the card with [-].
- Continue with a number card from B;
- Put there the card with the sign [=].
- Then, select the answer from number cards for the group C.

Activity 2.7.5

Use the table of place values and carry out the subtraction as it is given in the example below: 496 - 223 =

Example:

Hundreds (H)	Tens (T)	Ones (O)
4	9	6
- 2	2	3
2	7	3

Then, **496 - 223 = 273**

Work out :

a) 486 - 275 =
b) 365 - 162 =
c) 289 - 177 =
d) 487 - 351 =
e) 356 - 145 =
f) 464 - 252 =
g) 382 - 216 =
h) 396 - 156 =
i) 485 - 473 =

Let us work in groups to do more on the subtraction

Use your counters and fill in the missing number

a) 376=[ ]- 124
b) 420=[ ]- 78
c) 315=[ ]- 140
d) 250 = 475 - [ ]
e) 455 = 495 - [ ]
f) 330 = 478 - [ ]
g) 287 - [ ] = 47
h) 366 - [ ] = 140
i) 474 - [ ] = 124

2.7.3 Subtraction with Borrowing

Activity 2.7.6

Study this example of finding the answer for 462 - 245 and then subtract numbers with borrowing.

Example: 462 - 245 = 217

Hundreds (H)	Tens (T)	Ones (O)
	5	
4	~~6~~	10+2
- 2	4	5
2	1	7

For ones: 2-5 is now impossible.
I borrow one tems equivalent to 10 ones and them
10 Ones + 2 ones = 12
Then, 12 - 5 = 7
For tems: 5 - 4 = 1
For Hundreds: 4 - 2 = 2.

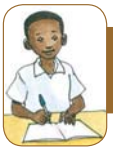
Let us work out the subtraction by borrowing

a) 452 - 247 =
b) 343 - 148 =
c) 264 - 139 =
d) 471 - 357 =
e) 345 - 228 =
f) 465 - 258 =
g) 372 - 228 =
h) 482 - 357 =
i) 495 - 389 =

I have learnt that:

When subtracting numbers,

- Start by ones;
- When the number of ones for the first number is less than the one for the second number, you borrow one tens equivalent to 10 ones.
- Add 10 ones borrowed to the number of ones for the first number and subtract;
- Go to tens: subtract the number of tens for the second number from the remained number of tens for the first number.
- Continue the process on tens and hundreds as you did for ones until the end.



Now, let us carry out the subtraction

a) 400 - 358 =
b) 397- 268 =
c) 493 - 334 =
d) 485 - 346 =
e) 336 - 327 =
f) 485 - 248 =

2.8 Solve problems involving subtraction in real life situations

Activity 2.8

Study this example carefully:

Example:

Our school has 378 as the total number of pupils. However, 132 pupils are in P6. How many pupils will remain after the departure of P6 pupils ?

Solution:

There will remain: 378 - 132 = 246

Solve these word problems:

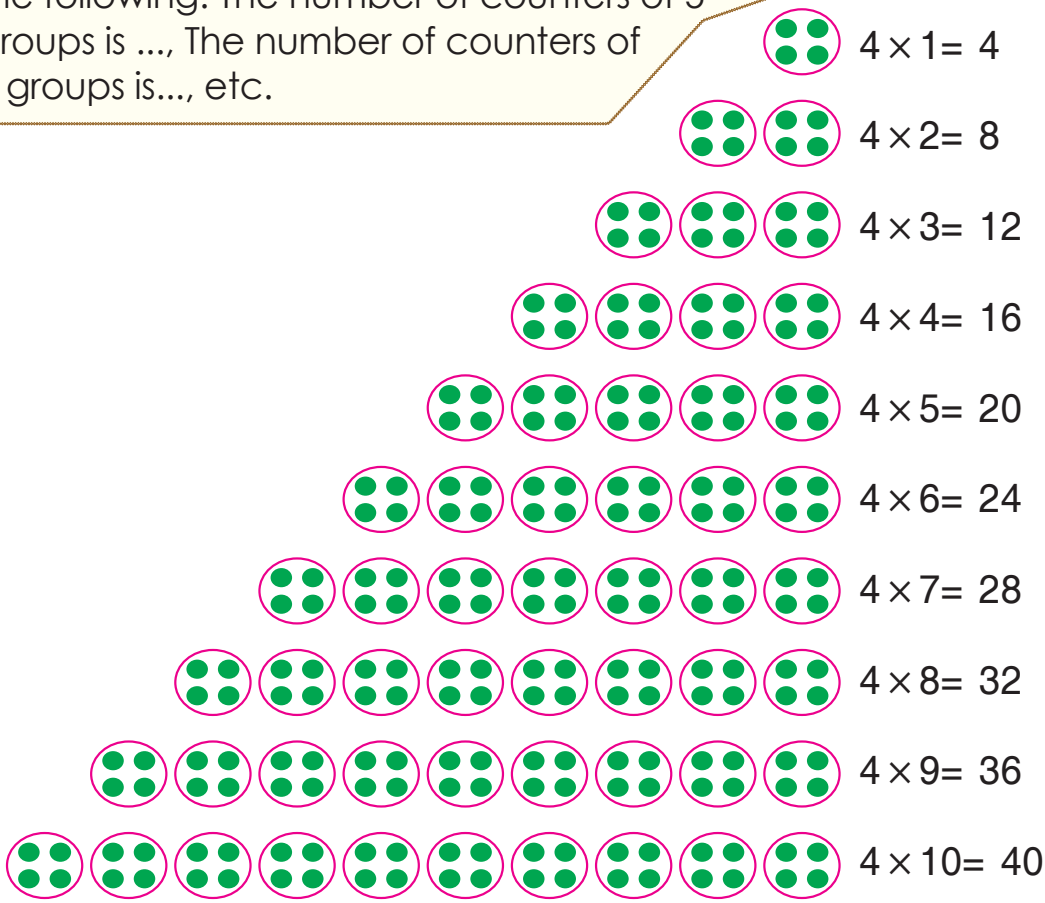
1. Tito has got 170 eggs. In this morning 87 were broken. How many eggs are left?
2. Makuza has 466 sacks of beans. His Sister has 387 sacks of beans.
   a) Who has more beans ?
   b) What is the difference between the sacks of the two people ?

2.9 Multiplication of whole numbers by 4 and the multiples of 4

Activity 2.9.1

Form different groups of 4 counters. Count the number of groups and the number of counters for those groups.

Do it in the following way: 1 group, 2 groups, 3 groups, 4 groups, 5 groups, 6 groups, 7 groups 8 groups, 9 groups and 10 groups. Write the number sentences of the following: The number of counters of 5 groups is ..., The number of counters of 6 groups is..., etc.



Note

The multiplication by 4 looks like the repeated addition of fours.

Activity 2.9.2

Fill in the missing number in the empty box

a) $4 = 4 \times \square$
b) $8 = \square \times 4$
c) $12 = 4 \times \square$
d) $16 = 4 \times \square$
e) $20 = \square \times 4$
f) $24 = 4 \times \square$
g) $28 = \square \times 4$
i) $32 = 4 \times \square$
k) $36 = \square \times 4$

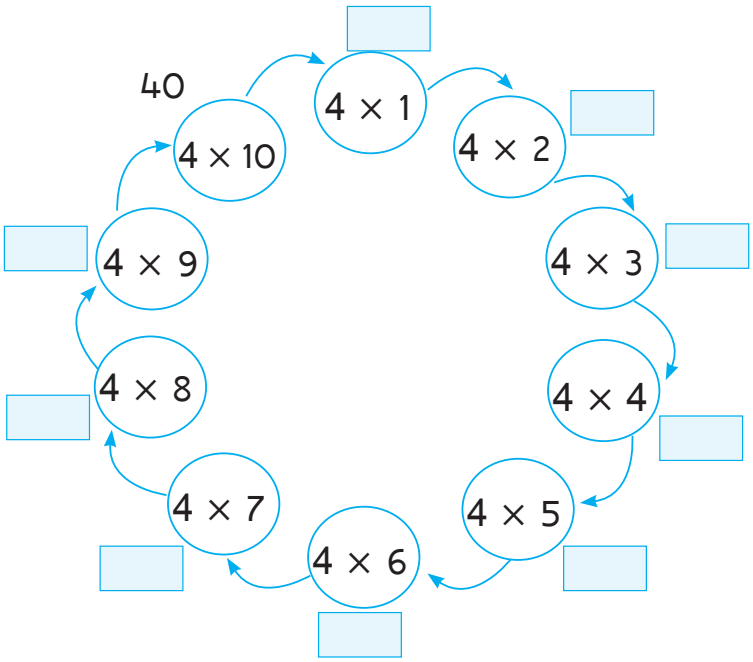
Now, I can carry out multiplication of a number by 4

Use the multiplication by 4 to complete the missing number

a)

X 4	1	2	3	4	5	6	7	8	9	10
	...	...	...	...	...	...	...	...	...	...

b)



c)

×4	...	2	...	4	...	6	...	8	...	10	÷ 4
	4	...	12	...	20	...	28	...	36	...	

Now, I can compare

a) $20 + 20 \square 4 \times 10$
b) $10 + 10 \square 4 \times 5$
c) $18 + 18 \square 4 \times 9$
d) $8 + 8 \square 4 \times 4$
e) $16 + 16 \square 4 \times 8$

e) $6 + 6 \square 4 \times 3$
f) $14 + 14 \square 4 \times 7$
g) $4 + 4 \square 4 \times 2$
h) $12 + 12 \square 4 \times 6$
i) $2 + 2 \square 4 \times 1$

2.10 Multiply a two-digit number by 4

Activity 2.10 .1

Study to this example and do the numbers that follow

- Letus find

Example:

$$\begin{array}{r} 21 \\ \times\ 4 \\ \hline 84 \end{array}$$

Tens (T)	Ones (O)
2 ×	1 → 4
8	4

- Now, Find:

a) $4 \times 11 =$
b) $4 \times 12 =$
c) $4 \times 21 =$
d) $4 \times 20 =$
e) $4 \times 30 =$
f) $4 \times 31 =$
g) $4 \times 32 =$
h) $4 \times 40 =$
i) $4 \times 41 =$
j) $4 \times 40 =$
k) $4 \times 51 =$
l) $4 \times 61 =$

I have learnt that :

When you multiply, start by multiplying ones and then multiply tens.

Activity 2.10 .2

Study to the example and multiply numbers by 4 correctly

Example:

$$\begin{array}{r} 52 \\ \times\ 4 \\ \hline 208 \end{array}$$

a) $\begin{array}{r} 71 \\ \times\ 4 \\ \hline \ldots \end{array}$ b) $\begin{array}{r} 72 \\ \times\ 4 \\ \hline \ldots \end{array}$ C) $\begin{array}{r} 80 \\ \times\ 4 \\ \hline \ldots \end{array}$ d) $\begin{array}{r} 92 \\ \times\ 4 \\ \hline \ldots \end{array}$

2.11 Word problems involving the multiplication of a number by 4

Activity 2.11

We can work in groups to solve real life problems involving multiplication by 4

Study the worked out example below:

We are 42 pupils in the classroom. Every pupil has 4 books. Find the total number of books we have in our classroom.

Solution:

Total number of books: $42 \times 4 = 168$

The total number of books is 168

Solve the following problems:

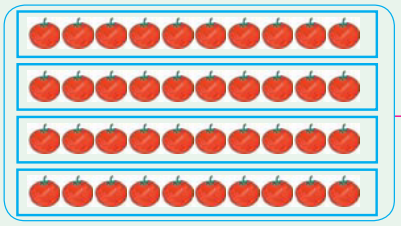
1. At our school we are 82 pupils. We are going to plant trees so that every pupil plants 4 trees. How many trees shall we plant altogether?
2. In the morning assemble the P3 pupils stand in rows in front of their classroom. If there are 22 pupils on each row, find the total number of pupils in the assembly.

2.12 Division of a number by 4

Activity 2.12.1

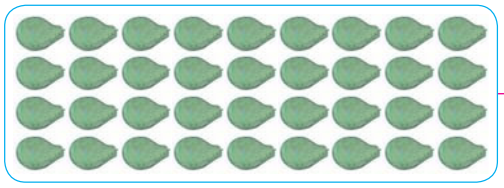
Count the number of objects you have. Group them equally in 4 groups. Count and write down the number of objects for each group.

Example:



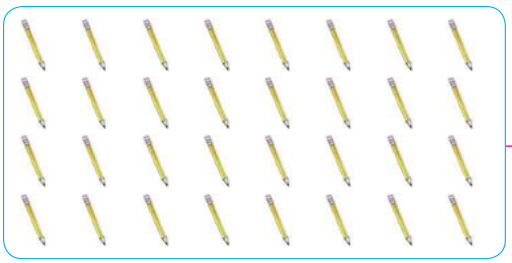
40 ÷ 4 = 10

a.



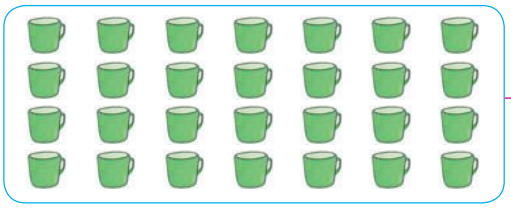
____ ÷ 4 = ____

b.



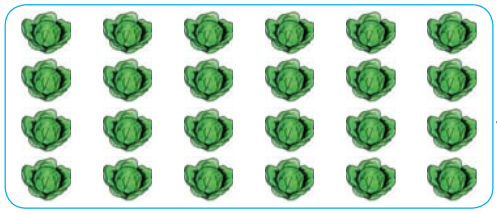
____ ÷ 4 = ____

c.



____ ÷ 4 = ____

d.



____ ÷ 4 = ____

2.13 Division of a two or three-digit numbers by 4 without a Remainder

Activity 2.13.1

Study this example carefully of dividing 84 by 4 .

Example:

$84 \div 4 = 21$

$$4\overline{)84}$$

21

-8

04

-4

0

a) $4\overline{)44}$ b) $4\overline{)64}$ c) $4\overline{)76}$

d) $4\overline{)56}$ e) $4\overline{)84}$ f) $4\overline{)68}$

Activity 2.13.2

Use a standard written method and divide numbers by 4

a) $80 \div 4 =$ c) $88 \div 4 =$ e) $96 \div 4 =$

b) $64 \div 4 =$ d) $92 \div 4 =$ f) $72 \div 4 =$

Activity 2.13.3

Study this example carefully and divide numbers that follow by 4

Example:

$$4\overline{)120}$$

30

-12

000

-0

0

$1 \div 4$ is now impossible

We take two digits (12)

$12 \div 4 = 3$

$0 \div 4 = 0$

a) $500 \div 4 =$ c) $492 \div 4 =$ e) $284 \div 4 =$ g) $376 \div 4 =$

b) $296 \div 4 =$ d) $388 \div 4 =$ f) $480 \div 4 =$ h) $472 \div 4 =$

i) 368 ÷ 4 = k) 260 ÷ 4 = m) 252 ÷ 4 = o) 344 ÷ 4 =

j) 464 ÷ 4 = l) 456 ÷ 4 = n) 448 ÷ 4 = p) 440 ÷ 4 =

I have learnt that :

1. When dividing a number using a standard written method, you start by the left side considering hundreds (when it is a three digit number) or tens (when it is a two-digit number);
2. When the first digit is not divisible by 4, consider also the second digit and deal with a two digit number.

2.14 Word problems involving the division of a number by 4

Activity 2.14

Study this example below:

Example:

The head teacher bought 488 books. These books were shared equally to 4 classes. How many books did each class get?

Solution:

Each class received: 488 ÷ 4 = 122

Each class got 122 books.

Solve the following problems:

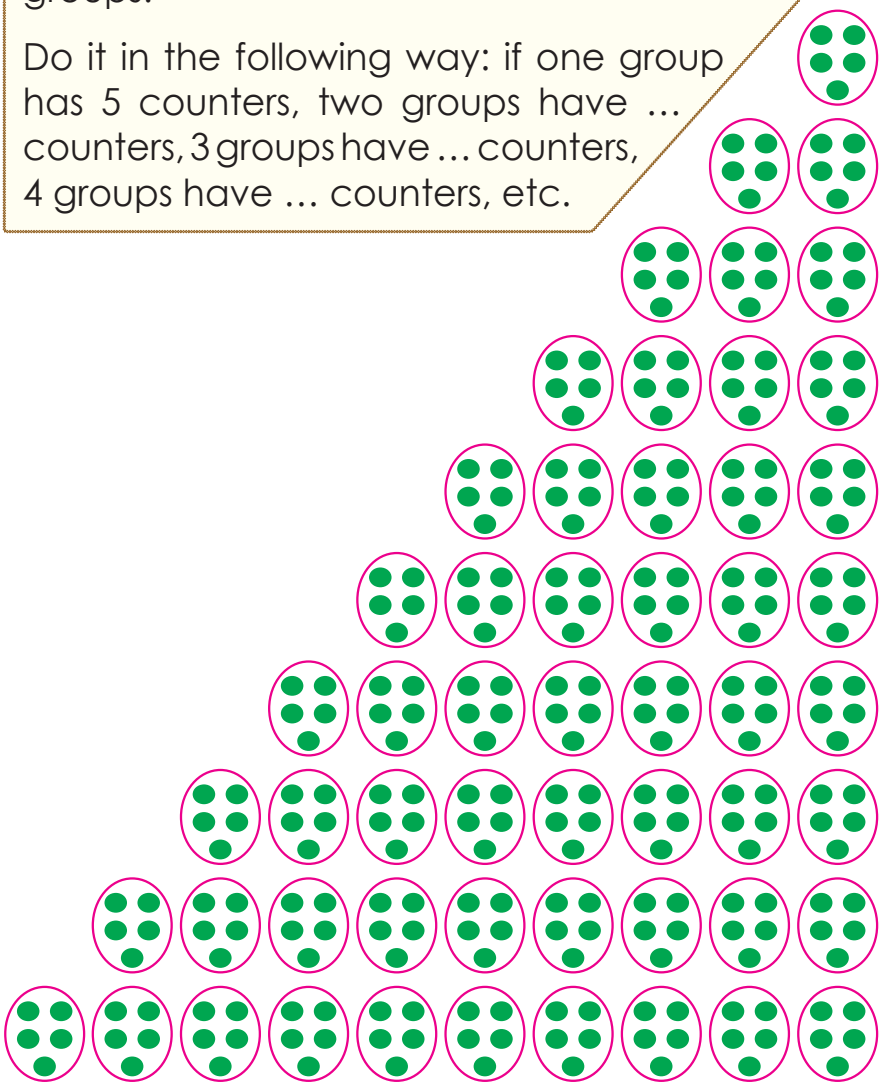
1. We are 4 children at home. Our Mum wants us to share 144 notebooks equally. How many notebooks does each child get?
2. There are 368 people in the conference hall. People sit in 4 equal columns. How many people are in each column?

2.15 Multiplication of whole numbers by 5 and the multiples of 5

Activity 2.15.1

Form different groups of 5 counters and count the number of groups and the number of counters for those groups.

Do it in the following way: if one group has 5 counters, two groups have ... counters, 3 groups have ... counters, 4 groups have ... counters, etc.



$5 \times 1 = 5$

$5 \times 2 = 10$

$5 \times 3 = 15$

$5 \times 4 = 20$

$5 \times 5 = 25$

$5 \times 6 = 30$

$5 \times 7 = 35$

$5 \times 8 = 40$

$5 \times 9 = 45$

$5 \times 10 = 50$

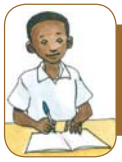
Note

The multiplication by 5 looks like the repeated addition of fives.

Activity 1.15.2

Fill in the missing number in the box

a) 5= ☐ × 5
b) 10= ☐ × 5
c) 15= ☐ × 5
d) 20= 5 × ☐
e) 25= ☐ × 5
f) 30= ☐ × 5
g) 35= ☐ × 5
h) 40= ☐ × 5
i) 45= ☐ × 5



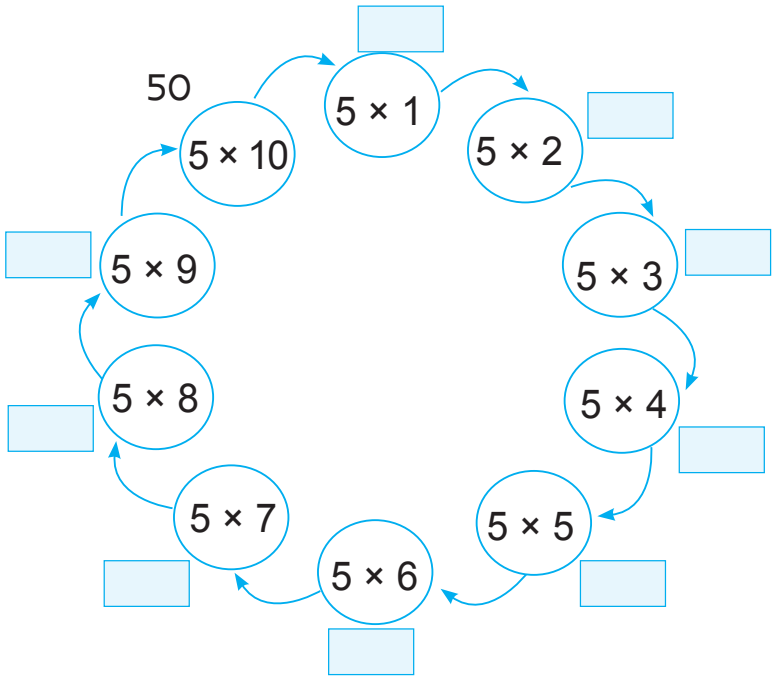
Now, I can complete a multiplication table by 5

Fill in the missing number in the multiplication table by 5

a)

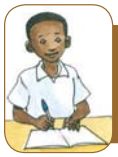
× 5	1	2	3	4	5	6	7	8	9	10
	...	...	...	...	...	...	...	...	...	...

b)



c)

× 5	...	2	...	4	...	6	...	8	...	10	÷ 5
	5	...	15	...	25	...	30	...	45	...	



Let us fill in the box with <, > or = to compare numbers

a)	25 + 25	☐	5 × 10	f)	10 + 5	☐	5 × 3
b)	10 + 15	☐	5 × 5	g)	20 + 15	☐	5 × 7
c)	20 + 25	☐	5 × 9	h)	5 + 5	☐	5 × 2
d)	10 + 10	☐	5 × 4	i)	15 + 15	☐	5 × 6
e)	20 + 20	☐	5 × 8	j)	2 + 3	☐	5 × 1

2.16 Multiply a two-digit number by 5

Activity 2.16 .1

Study this example and find the answer by using the table of place values.

Example: 21 x 5 =

Hundreds (H)	Tens (T)	Ones (O)
	2	1
	×	5
1	0	5

Then, 21 x 5 = 105

Find the answer by using the table of place values:

a) 11 x 5 =
b) 20 x 5 =
c) 21 x 5 =
c) 30 x 5 =
e) 31 x 5 =
f) 40 x 5 =
g) 41 x 5 =
h) 50 x 5 =
i) 60 x 5 =

I have learnt that :

When you multiply a two digit number by 5, start by multiplying ones and then multiply tens.

Activity 2.16.2

Study this example of multiplying a two digit numbers by 5.
Follow to this example and find the answer of each product.

Example:

$$\begin{array}{r} 61 \\ \times\ 5 \\ \hline 305 \end{array}$$

a) $\begin{array}{r} 81 \\ \times\ 5 \\ \hline \ldots \end{array}$ b) $\begin{array}{r} 91 \\ \times\ 5 \\ \hline \ldots \end{array}$ C) $\begin{array}{r} 80 \\ \times\ 5 \\ \hline \ldots \end{array}$ d) $\begin{array}{r} 51 \\ \times\ 5 \\ \hline \ldots \end{array}$

2.17 Word problems involving the multiplication by 5

Activity 2.17

Study this example :

In the conference hall of our school, chairs are arranged in 5 rows. If each row has 91 chairs, find the total number of chairs in the conference hall.

Solution:

The number of all chairs: 91 x 5 = 455

The number of all chairs is 455

Solve the following word problems:

1. During the distribution of mosquito nets, each family received 5 mosquito nets. How many nets were given to 81 families ?
2. If there are 5 cups on each tray, how many cups are there on 41 trays ?

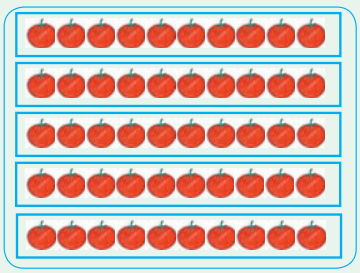
3. There are 61 benches in the conference hall. How many people can sit in the conference hall if only 5 can sit on each bench ?
4. One family has 5 people. How many people are in 31 families ?
5. There are 40 bottles of water in each box. How many bottles of water are in 5 boxes ?

2.18 Division of a two or three-digit number by 5 without a remainder

Activity 2.18.1

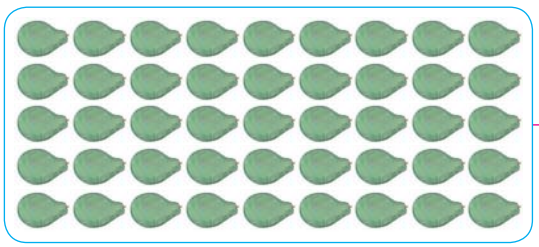
Count the number of objects you have. Write their number. Group them equally in 5 groups. Count and write down the number of objects in the appropriate box as it is done in the following example:

Example:

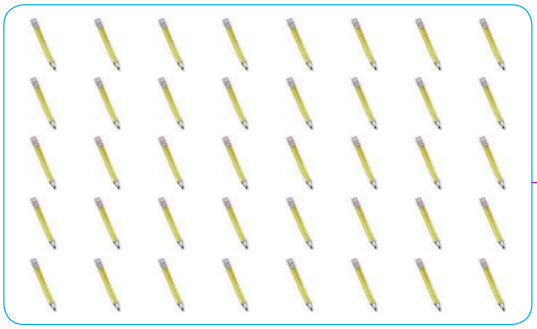


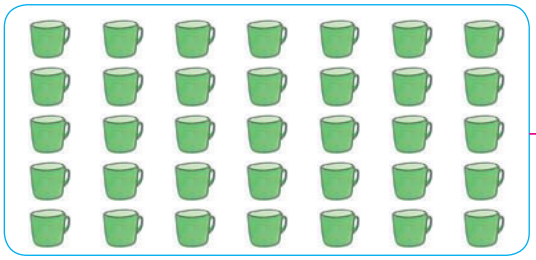
50 ÷ 5 = 10

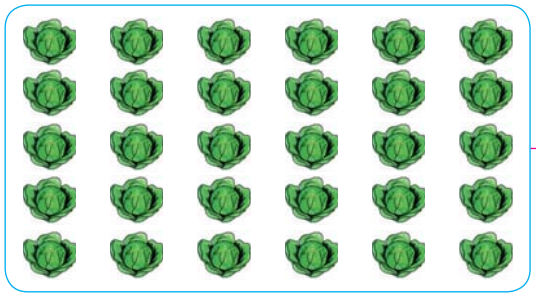
a)



☐ ÷ 5 = ☐

b)  → ☐ ÷ 5 = ☐

c)  → ☐ ÷ 5 = ☐

d)  → ☐ ÷ 5 = ☐

Let us complete the division table

1)

÷ 5	5	10	15	20	25	30	35	40	45	50
	___	___	___	___	___	___	___	___	___	___

2)

÷ 5	___	10	___	20	___	30	___	40	___	50	x 5
	1	___	3	___	5	___	7	___	9	___	

3) Think and give the answer

a) 50 ÷ 5 = d) 35 ÷ 5 = g) 20 ÷ 5 =

b) 45 ÷ 5 = e) 30 ÷ 5 = h) 15 ÷ 5 =

c) 40 ÷ 5 = f) 25 ÷ 5 = i) 10 ÷ 5 =

Activity 2.18.2

Study this example of dividing 55 by 5 .

Example:

55 ÷ 5 = 11

$$\begin{array}{r} 11 \\ 5\overline{)\,55} \\ -\,5 \\ \hline 05 \\ -\,5 \\ \hline 0 \end{array}$$

Tens (T)	Ones (O)
5 ÷ 5 = 1	5 ÷ 5 = 1

a) $5\overline{)\,60}$ b) $5\overline{)\,80}$ c) $5\overline{)\,90}$

d) $5\overline{)\,50}$ e) $5\overline{)\,65}$ f) $5\overline{)\,85}$ g) $5\overline{)\,95}$

Activity 2.18.3

Divide these numbers by 5 .

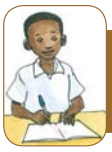
a) 105 ÷ 5 = c) 315 ÷ 5 = e) 330 ÷ 5 = g) 440 ÷ 5 =

b) 210 ÷ 5 = d) 220 ÷ 5 = f) 135 ÷ 5 = h) 145 ÷ 5 =

I have learnt that:

1) When dividing a number using a standard written method, you start by the left side considering hundreds (when it is a three digit number) or tens (when it is a two-digit number);

2) When the first digit is not divisible by 5, consider also the second digit and deal with a two digit number.



I can complete the multiplication table

×	0	1	2	3	4	5	6	7	8	9	10
2											
3											
4											
5											

2.19 Word problems involving the division of a two or 3 digit number by 5

Activity 2.19

Study this example carefully:

Example:

You have 65 oranges. If you share them equally among 5 pupils, how many oranges will each pupil get?

Solution:

One pupil can get: 65 ÷ 5 = 13

One pupil can get 13 oranges.

Then solve the following problems:

1. The cooperative of 5 farmers has 495 cows. If they share their cows equally, how many cows will each farmer get?
2. The health Center has 385 mosquito nets to be distributed equally to 5 villages in our Cell. Find the number of mosquito nets for each village.

END UNIT ASSESSMENT 2

1. Write in words or in figures

(a) 497

(b) Three hundred eighty six.

2. Underline the correct answer

(a) 3Ones 6Tens 4Hundreds = 1) 364 2) 463 3) 346

(b) 3Hundreds 2Ones 4Tens = 1) 324 2) 423 3) 342

3. Write the expanded number

(a) $(4 \times 100) + (8 \times 10) + (7 \times 1) =$

(b) $300 + 70 + 6 =$

4. Write each number in the table of place values

(a) 268 (b) 475 (c) 473 (d) 352

5. Use <, > and = to compare the following numbers

(a) 295 ☐ 295 (c) 478 ☐ 467

(b) 458 ☐ 378

6. Arrange the following numbers in ascending order (from the smallest to the largest)

439, 349, 493, 394,387, 479

7. Arrange the following numbers in descending order (from the largest to the smallest)

293, 239, 387, 470, 389, 499

8. Work out the following:

(a) 234 + 253 = (c) 378 + 114 =

(b) 257 + 208 = (d) 369 + 128 =

9. Find the difference:

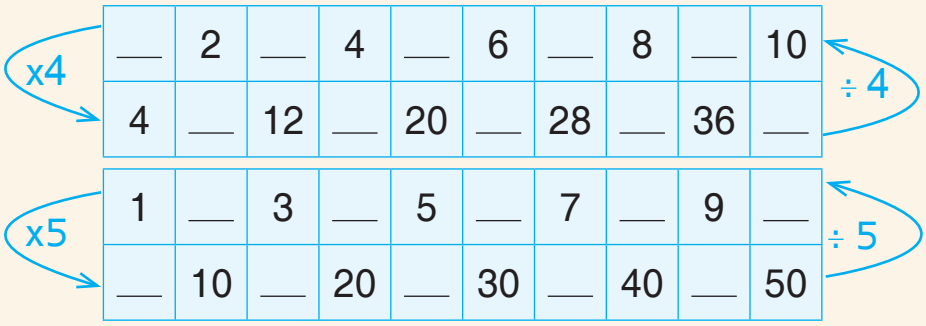
(a) 459 – 327 =

(b) 453 – 345 =

(c) 367 – 236 =

(d) 381 – 274 =

10. Complete the following multiplication or division table:



___	2	___	4	___	6	___	8	___	10
4	___	12	___	20	___	28	___	36	___

1	___	3	___	5	___	7	___	9	___
___	10	___	20	___	30	___	40	___	50

11. Work out the following product:

(a) 92 × 4

(b) 82 × 5

(c) 81 × 4

(d) 91 × 5

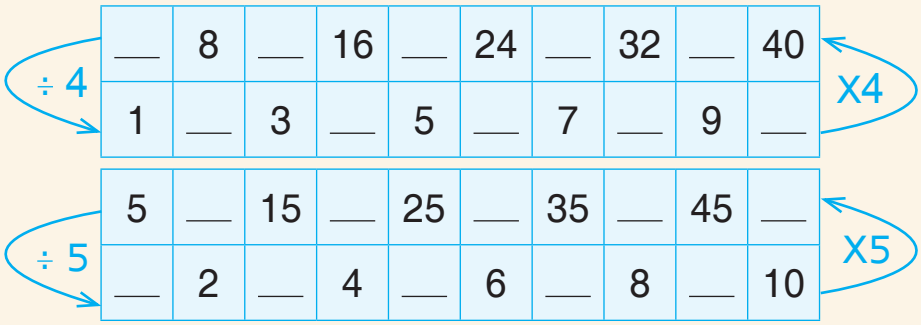
(e) 61 × 4

(f) 80 × 5

(g) 70 × 4

(h) 90 × 5

12. Find the missing numbers in the following multiplication table:



___	8	___	16	___	24	___	32	___	40
1	___	3	___	5	___	7	___	9	___

5	___	15	___	25	___	35	___	45	___
___	2	___	4	___	6	___	8	___	10

13. Work out the following division by using the standard written form.

(a) 488 ÷ 4 =

(b) 368 ÷ 4 =

(c) 465 ÷ 5 =

(d) 450 ÷ 5 =

(e) 464 ÷ 4 =

(f) 295 ÷ 5 =

14. Word problems

a) Our Village planted 256 trees. The neighboring Village also planted 239 trees. Find the total number of trees planted by the two villages.

b) Our school has 489 pupils. The number of boys is 297. Find the number of girls.

c) Head Mistress gave 4 books to every pupil. How many books did she give to 72 pupils?

d) Shared 496 books equally among 4 classrooms. How many books can each classroom get?

e) Chose the right answer:

Gisa shared equally 450 pineapples to 5 shops. Each shop got:

(i) 450 – 5 = 445 pineapples

(ii) 450 + 5 = 455 pineapples

(iii) 450 ÷ 5 = 90 pineapples

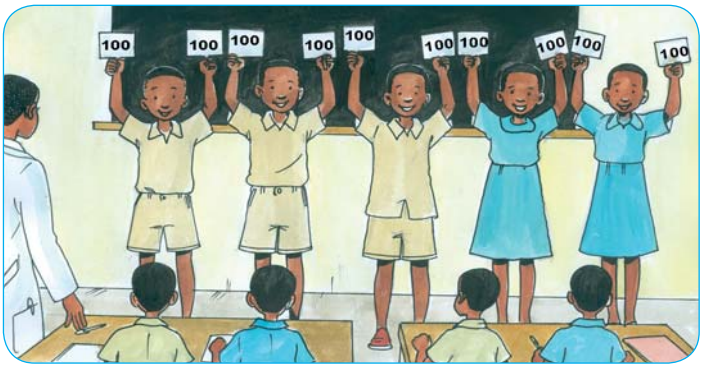
f) Muhoza has 196 sweets. He wants to share them equally among his 5friends . How many sweets will one each get?

Unit 3 Whole numbers from 0 up to 1000

3.1 Count, read and write whole numbers from 0 up to 1000

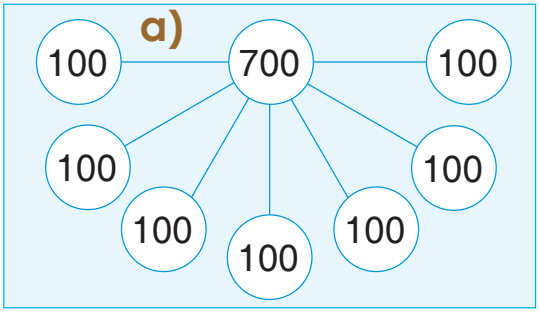
Activity 3.1.1

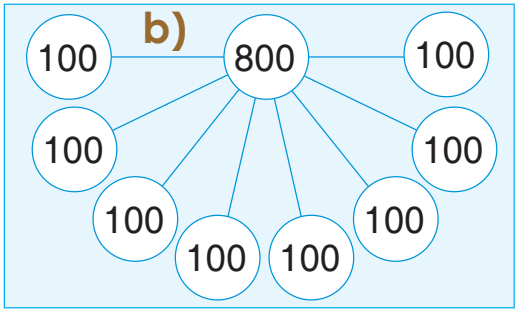
Study the picture carefully and tell your friend the number of times 100 appears.

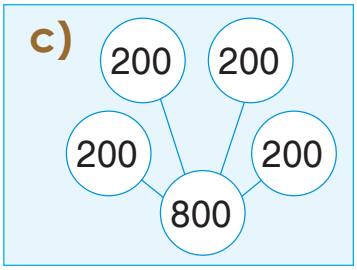


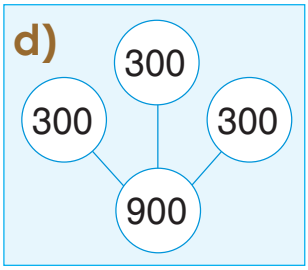
Activity 3.1.2

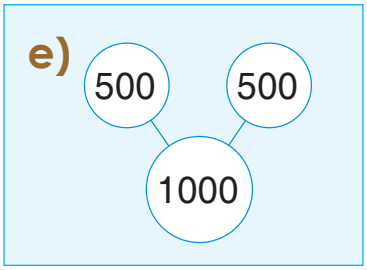
Read the numbers on a), b), c), d) and d) aloud using number names











Activity 3.1.3

Read numbers you see on the car number plates

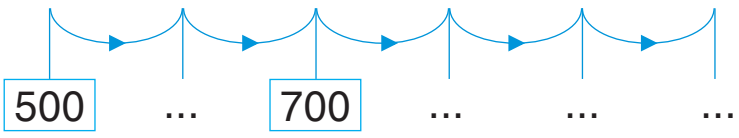
Activity 3.1.4

Study these numbers and read aloud

500	510	520	530	540	550	560	570	580	590	600
600	610	620	630	640	650	660	670	680	690	700
700	710	720	730	740	750	760	770	780	790	800
800	810	820	830	840	850	860	870	880	890	900
900	910	920	930	940	950	960	970	980	990	1000

Activity 3.1.5

Count in hundreds and complete the following number line



Activity 3.1.6

Complete the missing numbers in the following numeration table

500	501									510
550			553							
600						606				
650		652								
700				704						
750									759	
800								808		
850							857			
900						906				
950										960
990					995					1000

Activity 3.1.7

You have a container with number cards.

647	729	836	975	564	697	786	859	918	999

Pick randomly one number card from the container and tell your friend the number in words

Activity 3.1.8

Go to the classrooms of P1, P2 and P3. Ask them the number of pupils who are in each classroom. Write these numbers and go back to your classroom. Read to your friend the numbers you wrote.

Activity 3.1.9

Study the pictures carefully and arrange numbers from 500 up to 1000.

Activity 3.1.10

Complete the missing numbers on the following number lines:

a) 500 ☐ 502 ☐ 504 ☐ 506 ☐ 508 ☐ 510

b) 610 ☐ 630 ☐ 650 ☐ 670 ☐ 690 ☐

c) 710 ☐ 730 ☐ 750 ☐ 770 ☐ 790 ☐

d) 810 ☐ 830 ☐ 850 ☐ 870 ☐ 890 ☐

e) ☐ 920 ☐ 940 ☐ 960 ☐ 980 ☐ 1000

f) ☐ 200 ☐ 400 ☐ 600 ☐ 800 ☐ 1000

g) 500 510 ☐ ☐ 540 ☐ ☐ ☐ ☐ 590

h) 710 ☐ 730 ☐ 750 ☐ 770 ☐ 790 ☐

i) 905 915 ☐ 935 ☐ 955 ☐ 975 ☐ 995

j) 804 ☐ 844 ☐ 884 ☐ 924 ☐ 964 ☐

Activity 3.1.11

Write the following numbers in words

a) From 500 up to 510

b) From 665 up to 675

c) From 595 up to 605

d) From 846 up to 856

e) From 968 up to 978

Activity 3.1.12

Read and write these numbers in words

a) 725 b) 875 c) 998 d) 693

Activity 3.1.13

Read and write these numbers in figures

a) Six hundred eighty: ...

b) Eight hundred thirty: ...

c) Five hundred and five: ...

Activity 3.1.15

Work in pairs, fill in the missing numbers and read them

500					550					600
850				870						900
600							670			700
700		680								600
900	905									950
600						540				500
900								980		1000
550					600					650
650							720			750
750				790						850
950						980				1000

3.2 Place value of each digit of numbers from 0 up to 999

Activity 3.2.1

Use the example and write the following numbers in the table of place values

Example: **523**

Hundreds (H)	Tens (T)	Ones (O)
5	2	3

a) 523
b) 822
c) 745
d) 627
e) 943
f) 837
g) 933
h) 513
i) 584
j) 649
k) 769
l) 827
m) 998
n) 734

Activity 3.2.2

Use the table of place values and partition these numbers into hundreds (H), tens (T) and ones (O)

Example: 547 = 5H 4T 7O

a) 487 = ...H ....T .....O
b) 814 = ...H ....T .....O
c) 715 = ...H ....T .....O
d) 641 = ...H ....T .....O
e) 917 = ...H ....T .....O
f) 868 = ...H ....T .....O
g) 719 = ...H ....T .....O
h) 680 = ...H ....T .....O
i) 919 = ...H ....T .....O

Activity 3.2.3

Write down the number that was grouped into hundreds **(H)**, tens **(T)** and ones **(O)**.

a) 7T 3O 1H=
b) 5O 8H 2T=
c) 9H 6O 5T =
d) 8T 2O3 H=
g) 6H 5O 4T =
e) 5O 7T 2H=
h) 8O 4H 0T =
f) 7T 2H6O =
i) 5H 9 O 1T=

3.3 Comparing numbers from 0 up to 999

Activity 3.3.1

Take number cards with 325 and 253. Compare their numbers using >, < or =

Activity 3.3.2

Take number cards, refer to the example and compare the following numbers using <, > or =

Example:

530 < 611

a. 915 ... 835
b. 758 ... 681
c. 579 ... 579
d. 793 ... 900

Activity 3.3.3

Choose number cards randomly one after the other from a container.
Put them on a table and use comparing cards with the symbol <, > or = to compare your numbers.

Activity 3.3.4

Study the picture below and tell what is happening.

The number of sugar canes harvested by every class is given in this table:

Class	P1	P2	P3	P4	P5	P6
The number of sugar canes	625	700	810	697	800	950

Compare the harvest of: a) P1 and P2 c) P2 and P3
b) P1 and P3 d) P4 and P5

I can use <, > and = to compare numbers

a)	649 ☐ 946	e)	831 ☐ 528	i)	742 ☐ 627
b)	836 ☐ 967	f)	745 ☐ 745	j)	654 ☐ 849
c)	763 ☐ 531	g)	922 ☐ 627	k)	881 ☐ 813
d)	790 ☐ 604	h)	501 ☐ 601	l)	729 ☐ 729

3.4 Arranging numbers within 999 in ascending or descending order

3.4.1 Arranging numbers in ascending order (from the smallest to the largest)

Activity 3.4.1

Form groups of counters of the following numbers: 515, 650, 720, 847 and 905.

Count them and arrange these groups from the one with the smallest number to the one with the largest number.

Explain how you did it.

Activity 3.4.2

Study the picture. Arrange number cards from the smallest number to the largest number

Activity 2.4.3

Arrange the following numbers from the smallest to the largest

a) 542, 745, 603
b) 835, 784, 910
c) 947, 598, 612
d) 756, 882, 623
e) 777, 658, 831
f) 771, 717, 177

3.4.2 Arranging numbers in descending order (from the largest to the smallest)

Activity 3.4.4

Form groups of counters of the following numbers: 475, 649, 728, 694 and 823. Count them and arrange these numbers from the largest to the smallest number.

Activity 3.4.5

Study the number cards on this picture:
How have they arranged these numbers?

Do the same and arrange your number cards from the largest to the smallest number.

Activity 3.4.6

Arrange the following numbers from the largest to the smallest number

a) 522, 745, 830
b) 953, 848, 600
c) 779, 500, 615
d) 854, 728, 932
e) 524, 556, 637
f) 990, 799, 673

g) 612,621,672 i) 924,908,942 k) 672,607,627
h) 836,806,863 j) 739,709, 793 l) 549,509,594

3.5 Addition of numbers whose sum does not exceed 999

3.5.1 Mental work .

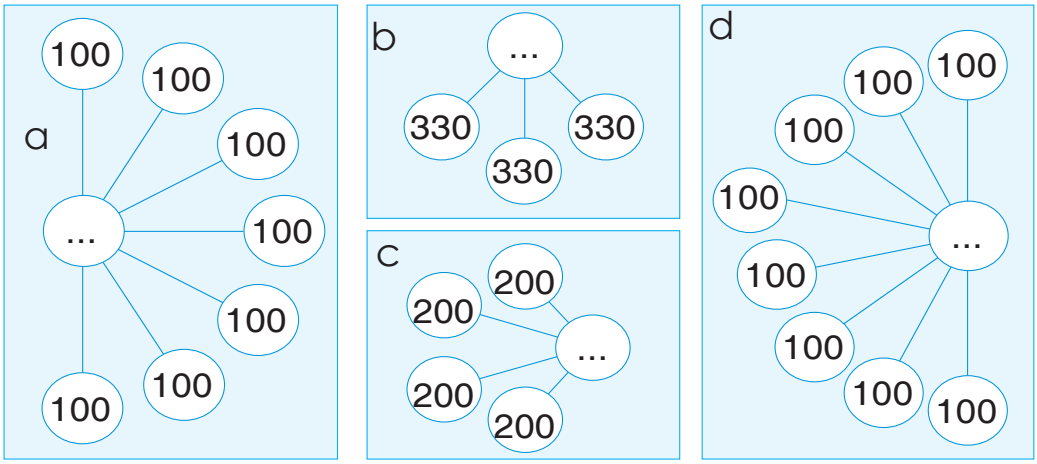
Activity 3.5.1

Think and give the sum of these numbers (Mental work)

a) 500 + 50 = d) 650 + 50 = g) 600 + 50 =
b) 500 + 20 = e) 800 + 50 = h) 850 + 50 =
c) 720 + 30 = f) 750 + 50 = i) 900 + 80 =

Activity 3.5.2

Read, add numbers and write the answer in the correct circle



3.5.2 Addition without carrying

Activity 3.5.3

Use the following number cards and cards with + and, = and do the task below:

A.	521	432	614	802	553	644
B.	425	335	214	102	421	320
C.	964	767	946	828	974	904

- Take one number card from A ;
- Continue with the card +
- Continue with a number card from B;
- Put there the card with the sign =
- Then, select the answer from number cards for the group C.

Example: 521 + 425 = 946

Activity 3.5.4

Refer to this example and add the numbers that follow

Example: 535 + 462 = 997

Hundreds (H)	Tens (T)	Ones (O)
5	3	5
+ 4	6	2
9	9	7

a) 523 + 475 =
b) 635 + 262 =
c) 712 + 277 =
d) 347 + 551 =
e) 752 + 245 =
f) 664 + 325 =
g) 682 + 216 =
h) 591+ 406 =
i) 615 + 381 =

Activity 3.5.5

Use, counting materials and find the missing number

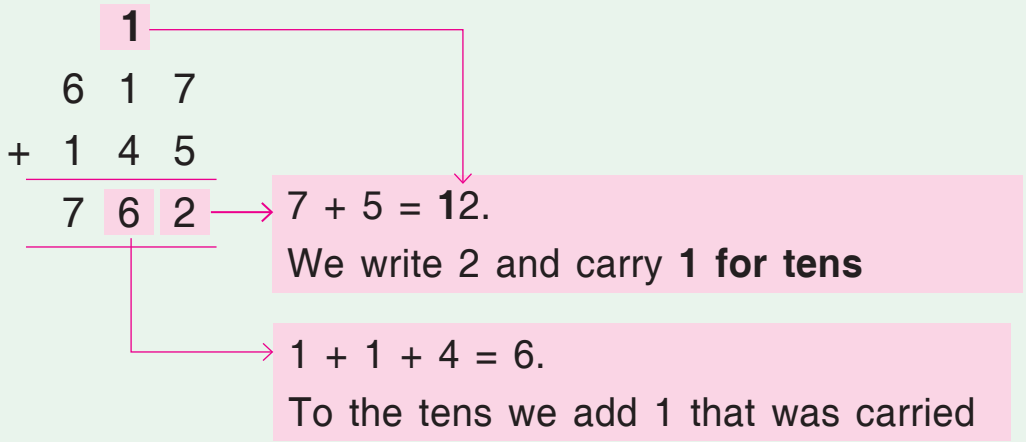
a) 201 + ☐ = 842
b) 255 + ☐ = 578
c) 366 + ☐ = 678
d) 301+ ☐ = 634
e) 203 + ☐ = 546
f) 200 + ☐ =738
g) 227+ ☐ = 647
h) 418+ ☐ = 799
i) 530 + ☐ = 635

3.5.3 Addition with carrying

Activity 3.5.6

Follow this example and add numbers that follow

Example: 617+145 = 762



a) 625 + 167 =
b) 534 + 148 =
c) 446 + 229 =
d) 617 + 175 =
e) 415 + 228 =
f) 523 + 228 =
g) 376+ 128 =
h) 518+ 315 =
i) 392+ 278 =

I have learnt that:

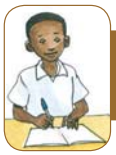
Use the table of place value to add numbers

When adding numbers, start by ones

Hundreds (H)	Tens (T)	Ones (O)
	1	
3	6	8
+ 5	2	4
8	9	2

Twandika 2 tukabitsa 1 mu binyacumi 8 + 4= 12

For ones: 8 + 4 =, we write 2 and carry 1 to the tens



Let us use the table of place values to add numbers

a) 520 + 258 = d) 685 + 146 = g) 449 + 336 = j) 565 + 208 =

b) 277 + 496 = e) 737 + 126 = h) 673 + 149 = k) 834 + 128 =

c) 539 + 143 = f) 588 + 145 = i) 489 + 227 = l) 798 + 186 =

3.6 Word problems involving the addition of numbers with the highest sum of 999

Activity 3.6

Follow this example below and solve question 1 and question 2

Let us solve problems in group

Example:

There were 567kg of maize in the store yesterday. In this morning they added more 312 kg of maize. How many kilograms of maize are in the store altogether?

Answer:

The total amount of maize: 567 kg + 312 kg= 879 kg
There are 879 kg of maize.

1. During exams, pupils used 534 sheets of paper in mathematics and 365 in Kinyarwanda. Find the total number of paper used.
2. On Saturday party we served 450 mangoes. On Sunday we used 539 mangoes. How many mangoes did we serve altogether?
3. In the morning there were 723 people in the market and 276 more people came in the afternoon. How many people came in the market altogether?

3.7 Subtraction of numbers within the range of 999

3.7.1 Mental work

Activity 3.7.1

Read, think and give the answer

a) 800 - 50 =
b) 900 - 50 =
c) 700 - 50 =
d) 600 - 50 =
e) 500 - 50 =
f) 950 - 150 =
g) 850 - 150 =
h) 650 - 150 =
i) 450 - 50 =

3.7. 2 Subtraction without Borrowing

Activity 3.7.2

Study the picture carefully and tell what the pupils are doing.

Activity 3.7.3

Find the cards with [-], [=] and the following number cards:

A. 875 964 787 649 584 938

B. 365 538 242 615 272 752

C. 34 312 426 186 510 545

Use them to do the task below:

- Take one number card from A ;
- Next to it, put the card with [-]
- Continue with a number card from B;
- Put there the card with the sign [=]
- Then, select the answer from number cards for the group C.

Example: 875 — 365 = 510

Activity 3.7.5

Use the table of place values and carry out the subtraction as it is given in the example below: **995 - 463 =**

Example:

Hundreds (H)	Tens (T)	Ones (O)
9	9	5
- 4	6	3
5	3	2

Then, 995 - 463 = 532

Work out :

a) 986 – 275 =
b) 864 – 162 =
c) 789 – 177 =
d) 687 – 351=
e) 648 – 145 =
f) 763 – 252 =
g) 987 – 216 =
h) 896 – 154 =
i) 786 – 473 =

3.7.3 Subtraction with Borrowing

Activity 3.7.6

Study this example of finding the answer of 651 - 245 =
Then subtract the numbers that follow.

Example:

Hundreds (H)	Tens (T)	Ones (O)
	4	10) 10 + 1
6	5	1)
– 2	4	5
4	0	6

651 – 245. When you subtract, start by ones .
1 – 5 is impossible. I borrow 1 tens from 5 this equals to 10 ones, and 10 Ones + 10 Ones = 11Ones.
then, 11- 5 = 6. For Tens: 4 - 4 = 0
For Tens 6 - 2 = 4

$$\begin{array}{r} {\scriptstyle 4\ \ \ } \\ 6\not{5}\,1 \\ -\ 2\,4\,5 \\ \hline 4\,0\,6 \end{array}$$

a) 651 - 246 =
b) 542 - 147 =
c) 463 - 138 =
d) 774 - 359=
e) 845 - 226 =
f) 966 - 257 =
g) 577 - 228 =
h) 783 - 357 =
i) 694 - 389 =

Let me subtract with borrowing

1. Use the table of place values while subtracting

a) 785 - 356 =
b) 937 - 268 =
c) 693 - 339 =
d) 785 - 348 =
e) 836 - 327 =
f) 985 - 246 =

g) 721 - 272 =
h) 832 - 149 =
i) 642 - 247 =
j) 438 - 399 =
k) 934 - 288 =
l) 296 - 199 =
m) 634 - 277 =
n) 731 - 292 =
o) 543 - 247 =
p) 732 - 163 =
r) 296 - 199 =
s) 634 - 277 =
t) 731 - 292 =
u) 543 - 247 =
v) 732 - 163 =

2. Use counting materials and fill in the missing number

a) 576 = ☐ - 124
b) 520 = ☐ - 78
c) 415 = ☐ - 140
d) 250 = 675 - ☐
e) 455 = 795 - ☐
f) 330 = 668 - ☐
g) 887 - ☐ = 47
h) 966 - ☐ = 140
i) 474 - ☐ = 324

3.8 Solve problems involving subtraction in real life situations

Activity 3.8

Let us solve problems in group

Study this example carefully :

Example

There were 850 reading books in the library. If 615 were taken to the classroom, How many books remained in the library?

Solution:

The library remained with: 850 - 615 = 235
The library remained with 235 books

Solve the following problems:

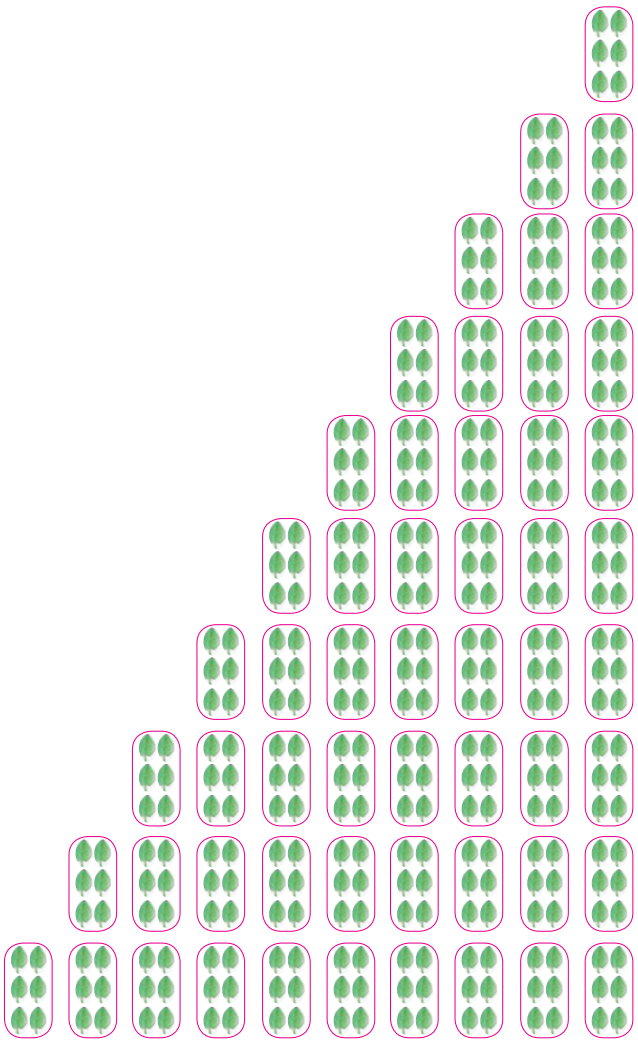
1. Our teacher bought 500 pens. She gave us 342 pens.
   How many pens did she remain with ?
2. Butera harvested 646 sacks of sweet potatoes. His sister harvested 837 sacks
   a) Who had more sacks of sweet potatoes?
   b) Find the difference between Butera and his sister's harvest.
3. Last year Zigama had 954 shirts in his shop. He sold 719 of them. How many shirts remained?
4. Our Sector bought 960 bottles of soda for a party. Only 756 people attended the party and every person took one bottle of soda. How many bottles remained?
5. The government bought 942 cars. If 749 cars are small, how many big cars did the government buy?

3.9 Multiplication of whole numbers by 6 and the multiples.

Activity 3.9.1

Form different groups of 6 counters. Count the number of groups and the number of counters for those groups.

Do it in the following way: 1 group, 2 groups, 3 groups, 4 groups, 5 groups, 6 groups, 7 groups 8 groups, 9 groups and 10 groups. Write the number sentences of the following: The number of counters for 5 groups is ..., The number of counters for 9 groups is..., etc.



Note

The multiplication by 6 looks like the repeated addition of sixes.

Activity 3.9.2

Fill in the missing numbers:

a) 6 = 6× ☐

b) 12 = ☐ x 6

c) 18 = 6× ☐

d) 24 = ☐ x 6

e) 30 = 6× ☐

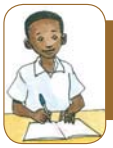
f) 36 = ☐ × 6

g) 42 = 6× ☐

h) 48 = ☐ × 6

i) 54 = ☐ × 6

j) 60 = 6 × ☐



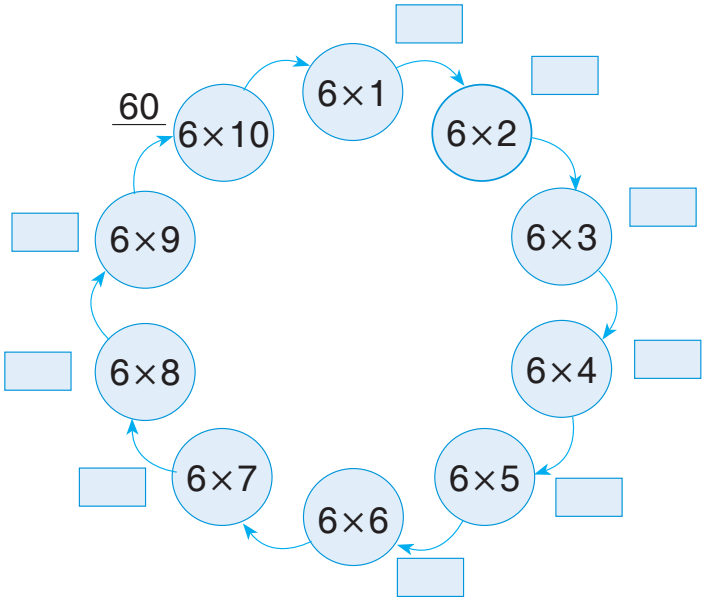
Let me carry out multiplication of a number by 6

Use the multiplication by 6 and complete the missing number

a)

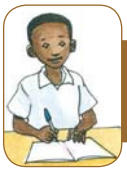
×6	1	2	3		5	6	7	8	9	10
	...	...	...	...	...	...	...	...	...	...

b)



c)

×6	...	2	...	4	...	6	...	8	...	10	÷ 6
	6	...	18	...	30	...	42	...	54	...	



Let me compare the sum and the product

a)	30 + 30		6 x 10	f)	15 + 3		6 x 3
b)	15 + 15		6 x 5	g)	20 + 22		6 x 7
c)	30 + 24		6 x 9	h)	6 + 6		6 x 2
d)	10 + 14		6 x 4	i)	15 + 21		6 X 6
e)	24 + 24		6 x 8	j)	3 + 3		6 x 1

3.10 Multiply a two or three-digit number by 6

Activity 3.10 .1

Study this example carefully then do the work that follows:

Let us find 21 x 6

Hundreds (H)	Tens (T)	Ones (O)
×	2	1 6
1	2	6

I have learnt that:

When you multiply, start by multiplying ones and then multiply tens.

$$\begin{array}{r} 2\ 5 \\ \times\quad 6 \\ \hline 1\ 5\ 0 \\ \hline \end{array}$$

$5 \times 6 = 30$.

We write 0 and carry the tens **3**

$2 \times 6 = 12$.

We add **3** that was carried: **3** + 12 = 15

Calculate:

a) 6 x 11 =
b) 6 x 20=
c) 6 x 21 =
c) 6 x 30 =
e) 6 x 31 =
f) 6 x 40 =
g) 6 x 41 =
h) 6 x 50 =
i) 6 x 60 =

Activity 3.10 .2

Study this example carefully and then multiply numbers by 6.

70 x 6 =

Example:

$$\begin{array}{r} 70 \\ \times\ 6 \\ \hline 420 \end{array}$$

a) $\begin{array}{r} 81 \\ \times\ 6 \\ \hline \end{array}$ b) $\begin{array}{r} 80 \\ \times\ 6 \\ \hline \end{array}$ c) $\begin{array}{r} 90 \\ \times\ 6 \\ \hline \end{array}$ d) $\begin{array}{r} 91 \\ \times\ 6 \\ \hline \end{array}$

e) $\begin{array}{r} 71 \\ \times\ 6 \\ \hline \end{array}$ f) $\begin{array}{r} 61 \\ \times\ 6 \\ \hline \end{array}$ g) $\begin{array}{r} 51 \\ \times\ 6 \\ \hline \end{array}$ h) $\begin{array}{r} 10 \\ \times\ 6 \\ \hline \end{array}$

3.11 Word problems involving the multiplication of a number by 6

Let us work in groups to solve real life problems involving multiplication by 6

Activity 3.11

Study this worked out example carefully :

Example:

During Umuganda for last month every person planted 6 trees. How many trees were planted by 91 people

Solution:

The number of trees: 91 × 6 = 546

The number of trees is 546

$$\begin{array}{r} 91 \\ \times\ 6 \\ \hline 546 \end{array}$$

Solve the following word problems:

1. In the church, 6 people sit on one bench. How many people can sit on 51 benches?
2. Every pupil has 6 notebooks. Find the total number of notebooks for 41 pupils.

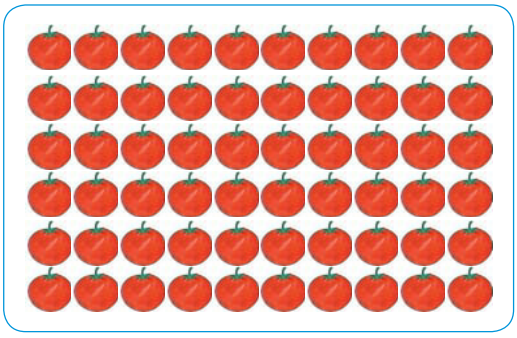
3. A flat building in Kigali city center has 31 floors. If each floor has 6 rooms, find the total number of rooms in flat building.
4. In the morning assemble P5 pupils stood in 6 rows. If there are 61 pupils on each row, find the total number of pupils who were in the assembly.
5. Chairs for the conference hall are arranged in 6 columns. If every column has 95 chairs, find the total number of chairs in the conference hall.
6. A Carpenter has 6 big trees. If he cuts 50 pieces of timber from each tree. Find the total number of pieces of timber he can cut from his trees.

3.12 Division of a number by 6

Activity 3.12

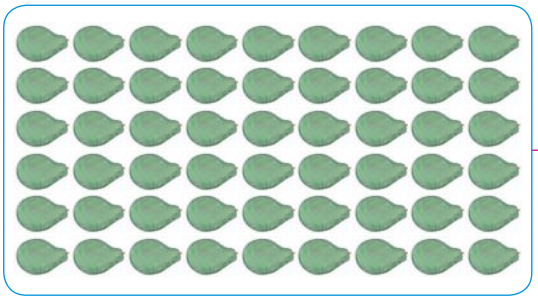
Count the number of objects you have. Group them equally in groups of 6 counters. Count and write down the number of objects for each group.

a)



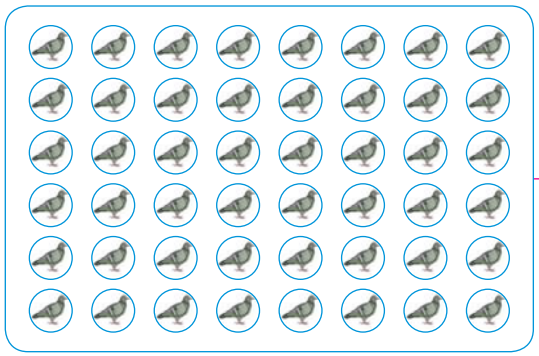
→ ☐ ÷ 6 = ☐

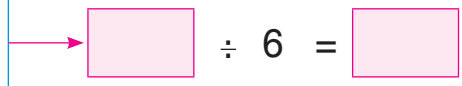
b)



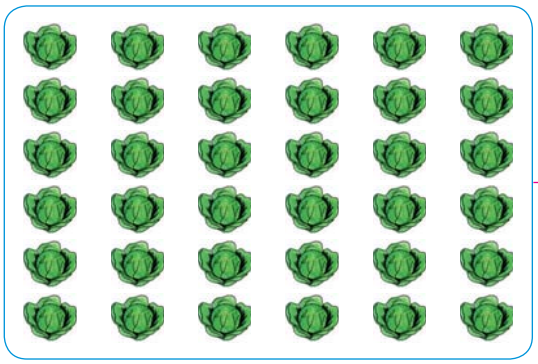
→ ☐ ÷ 6 = ☐

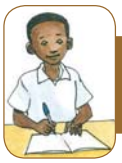
c)





d)





Let me complete the multiplication table

1)

÷ 6	6	12	18	24	30	36	42	48	54	60
	...	...	...	...	...	...	...	...	...	...

2)

÷ 6	...	12	...	24	...	36	...	48	...	60	x6
	1	...	3	...	5	...	7	...	9	...	

3) Work out:

(a) 60 ÷ 6 = ☐
(b) 42 ÷ 6 = ☐
(c) 24 ÷ 6 = ☐
(d) 54 ÷ 6 = ☐
(e) 36 ÷ 6 = ☐
(f) 18 ÷ 6 = ☐
(g) 48 ÷ 6 = ☐
(h) 30 ÷ 6 = ☐
(i) 12 ÷ 6 = ☐

3.13 Division of a two or three-digit numbers by 6 without a Remainder

Activity 3.13

Study this example of dividing 66 by 6 .and divide the numbers that follow

Example

$66 \div 6 = 11$

$$\begin{array}{r} 11 \\ 6\overline{)\,66} \\ -\,6 \\ \hline 06 \\ -\,6 \\ \hline 0 \end{array}$$

Tens (T)	Ones (O)
$6 \div 6 = 1$	$6 \div 6 = 1$
$60 \div 6 = 10$	

a) $6\overline{)72}$ b) $6\overline{)144}$ c) $6\overline{)78}$ d) $6\overline{)114}$

e) $6\overline{)720}$ f) $6\overline{)780}$ g) $6\overline{)204}$ h) $6\overline{)636}$

i) $6\overline{)666}$ j) $6\overline{)264}$ k) $6\overline{)930}$ l) $6\overline{)420}$

I have learnt that:

1. When dividing a number using a standard written method, you start by the left side considering hundreds (when it is a three digit number) or tens (when it is a two-digit number);
2. When the first digit is not divisible by 6, consider also the second digit and deal with a two digit number and continue.

Let me divide through the standard written method

a) 186 ÷ 6=☐ d) 300 ÷ 6=☐ g) 480 ÷ 6 =☐ j) 888 ÷ 6 =☐

b) 198 ÷ 6=☐ e) 366 ÷ 6=☐ h) 600 ÷ 6 =☐ k) 570 ÷ 6 =☐

c) 264÷ 6=☐ f) 396 ÷ 6=☐ i) 960 ÷ 6 =☐ l) 966 ÷ 6 =☐

3.14 Word problems involving the division of a number by 6

Let us work in groups to solve the word problems involving division by 6

Activity 3.14

Study this example carefully :

The District shared 984 books equally among 6 schools. How many books does each school get?

Solution:

Each school gets: 984 ÷ 6 = 164

Each school gets 164 books.

$$
\begin{array}{r}
164 \\
6\overline{)\,984} \\
-\,6\downarrow \\
\hline
38 \\
-\,36 \\
\hline
024 \\
-\,24 \\
\hline
00
\end{array}
$$

Solve the following problems:

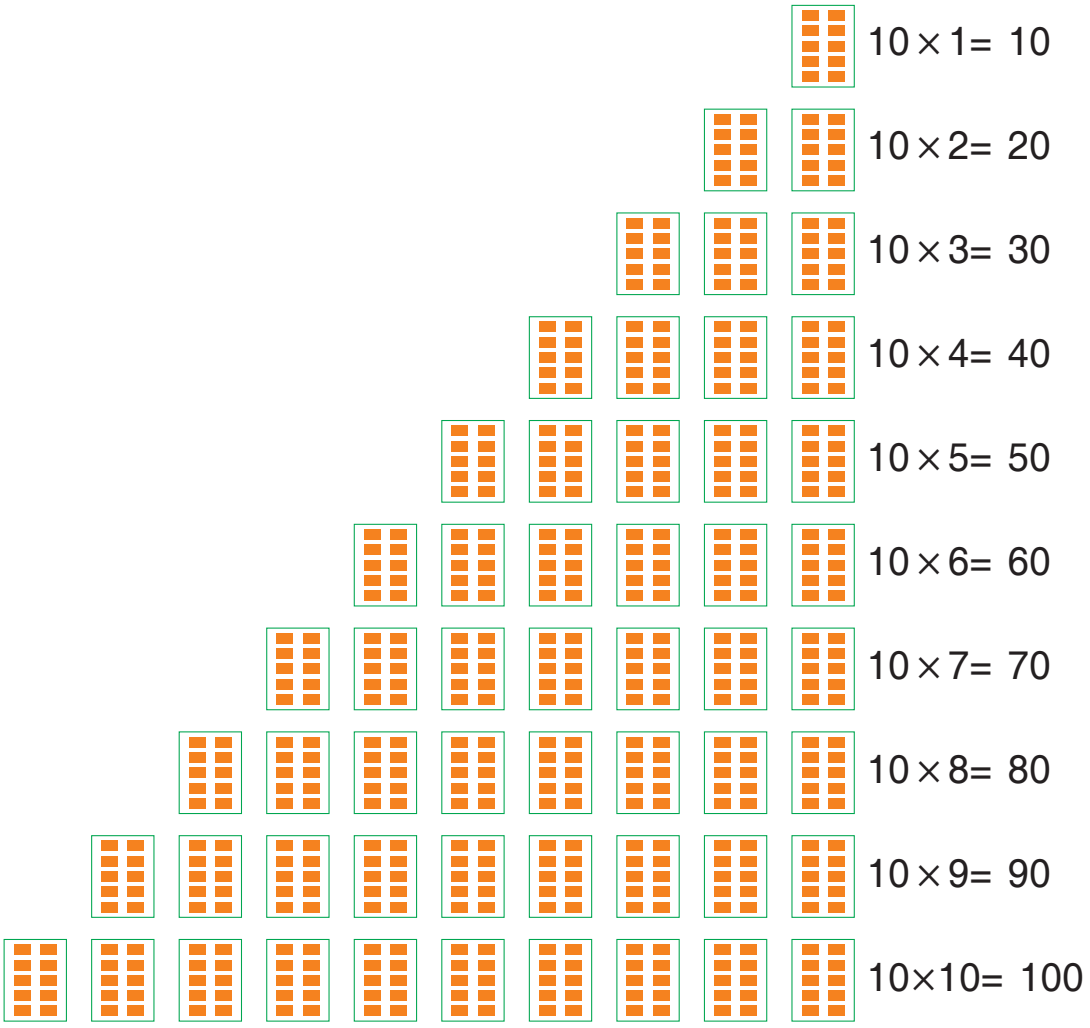
1. Share 246 notebooks equally among 6 pupils. What does each pupil get?
2. Musoni's cows produce 486 liters of milk in 6 days. If the daily production is the same, find the number of litters they produce in one day.

3. Share 864 balls equally among 6 schools. How many balls does each school get?

3.15 Multiplication of whole numbers by 10 or by 100

Activity 3.15.1

Form different groups of 10 counters and count the number of groups and the number of counters for those groups. How many groups of tens have you got?



Note

The multiplication by 10 looks like the repeated addition of tens.

I have learnt that:

- When you multiply a number by 10, write this number and a zero as a ones.
- When you multiply a number by 100, write this number and two zeros where one is a tens and the other is a ones.

Activity 3.15.2

Use these examples to multiply by 10 or by 100 and find the answers for the activity that follows :

Examples :

10 x 23 = 230	10 x 99= 990	100 x 2 = 200
10 x 60 = 600	100 x 1 = 100	100x 3 = 300

a) 10 x 11 = ☐
b) 10 x 22 = ☐
c) 10 x 35 = ☐
d) 10 x 48 = ☐
e) 10 x 53 = ☐
f) 10 x 68 = ☐
g) 10 x 71 = ☐
h) 10 x 86 = ☐
i) 10 x 97 = ☐
j) 10 x 100 = ☐
k) 100 x 4 = ☐
l) 100 x 5 = ☐

Let me multiply by 10 or by 100

1) Complete the multiplication by 10 or by 100

a) ☐ x 97 = 970
b) ☐ x 64= 640
c) ☐ x 83 = 830
d) ☐ x 4 = 400
e) ☐ x 7 = 700
f) ☐ x 9 = 900
g) ☐ x 59 = 590
h) ☐ x 29 = 290
i) 10 x ☐ =1000
j) ☐ x 10 = 100
k) ☐ x 77 = 770
l) ☐ x 5 = 500

2) Complete this multiplication table

a)

	1	2	3	4	5	6	7	8	9	10
× 2										
× 3										
× 4										
× 5										
× 6										
× 10										

b)

	12	24	36	48	60
÷ 2					
÷ 3					
÷ 6					

c)

	10	20	30	40	50	60	70	80	90	100	200
÷ 2											
÷ 5											

3) Work out the multiplication

a) 70 x 10 = ☐

b) 80 x 10 = ☐

c) 99 x 10 = ☐

d) 63 x10 = ☐

e) 71 x 10 = ☐

f) 40 x 10 = ☐

g) 8 x 100 = ☐

h) 21 x 10 = ☐

END UNIT ASSESSMENT 3

1. Write in words or in figures

(a) 976 :

(b) Eight hundred thirty five

2. Underline the correct number

(a) 9 O 7 H 6 T ⟶ 1) 976 2) 796 3) 769

(b) 8 O 4 T 9 H: ⟶ 1) 948 2) 849 3) 498

3. Write the expanded number

(a) $(8 \times 100) + (7 \times 10) + (9 \times 1) =$

(b) $900 + 90 + 9 =$

4. Write these numbers in a place value table

(a) 896 (b) 759 (c) 837 (d) 925

5. Use <, > and = to compare numbers

(a) 985 ☐ 895 (c) 768 ☐ 768

(b) 594 ☐ 854 (d) 972 ☐ 927

6. Arrange the following numbers from the smallest to the largest.

793, 947, 986, 969,678, 789

7. Arrange the following numbers from the largest to the smallest.

972, 984, 837, 749, 839, 949

8. Carry out the addition

(a) 534 + 453 = (b) 738 + 241 =

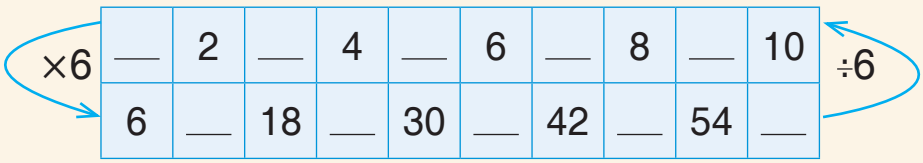
(c) 572 + 418 = (d) 693 + 289 =

9. Carry out the subtraction

(a) 857 – 727 = (b) 967 – 856 =

(c) 935 – 798 = (d) 618 – 579 =

10. Complete the following multiplication or division table



___	2	___	4	___	6	___	8	___	10
6	___	18	___	30	___	42	___	54	___

11. Carry out the multiplication

(a) 91 × 6 = ___

(b) 51 × 6 = ___

(c) 80 × 6 = ___

(d) 90 × 6 = ___

(e) 71 × 6 = ___

(f) 50 × 6 = ___

(g) 61 × 6 = ___

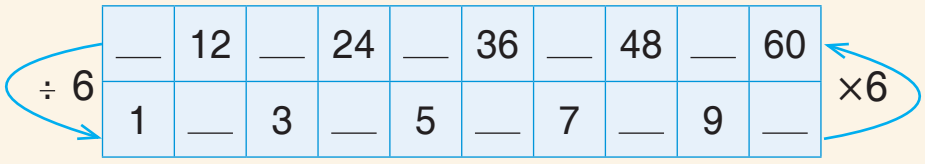
(h) 41 × 6 = ___

12. Complete the multiplication by 10 or by 100

(a) 9 × ☐ = 900 (b) 89 × ☐ = 890

(c) ☐ × 98 = 980 (d) ☐ × 8 = 800

13. Complete the missing numbers in the following division or multiplication table



___	12	___	24	___	36	___	48	___	60
1	___	3	___	5	___	7	___	9	___

14. Divide the following numbers by 6

(a) 966 ÷ 6 =
(b) 684 ÷ 6 =
(c) 564 ÷ 6 =
(d) 624 ÷ 6 =
(e) 864 ÷ 6 =
(f) 870 ÷ 6 =
(g) 774 ÷ 6 =
(h) 954 ÷ 6 =
(i) 978 ÷ 6 =
(j) 786 ÷ 6 =

15. Word problems

(a) Shema had 78 cows. This morning he sold 568 cows. How many cows remained?

(b) What number can you add to 567 to get 999?

(c) There were 967 books in the library. If students borrowed 765 books, how many books were left in the library?

(d) What number can you subtract from 987 to get 556?

(e) Which number can you add to 568 to get 879?

(f) Bumanzi Village has 235 men, 262 women and 302 children. How many people are there altogether in Bumanzi village?

(g) Share 864 mosquito nets equally among 6 Villages. How many mosquito nets does each village get?

(h) There are 6 classrooms of P2 in our school. If every classroom has 41 pupils, how many pupils are in P2?

(i) Ntwari has 186 bottles of water. He wants to park these bottles equally in 6 boxes. How many bottles of water will be in one box?

Unit 4 Fractions $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$

4.1 The fraction $(\frac{1}{2})$

a) Reading and writing the fraction $\frac{1}{2}$ (a half)

Activity 4.1.1

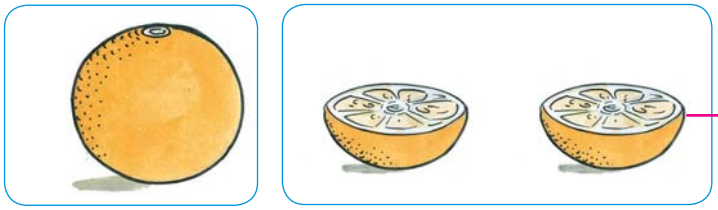
Take a full sheet of paper. Fold the paper in 2 equal parts. Separate them and discuss them with your friends

Activity 4.1.2

Take a full sheet of paper. Fold the paper in 2 equal parts. Shade one part and compare the shaded and the non shaded part.

Activity 4.1.3

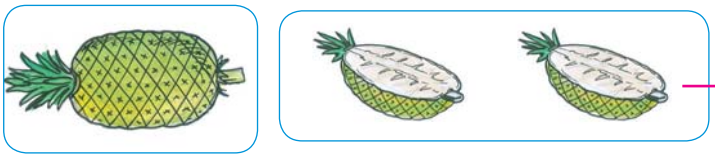
Study the pictures carefully and write the name of the part of an object.

a) 

This ... of the whole orange.

b) 

This is ... of a whole pawpaw

c) 

This is ... of a whole peanaple

I have learnt that :

- An orange, a pawpaw and a pineapple, each of them is a **whole object**. If it is cut into two equal parts, one of them is **a half**.
- One half or one over two ($\frac{1}{2}$) **is a fraction**.
- $\frac{1}{2}$ (**One half**) of an object and another **one half** of the same object make a **whole**.

Activity 4.1.3

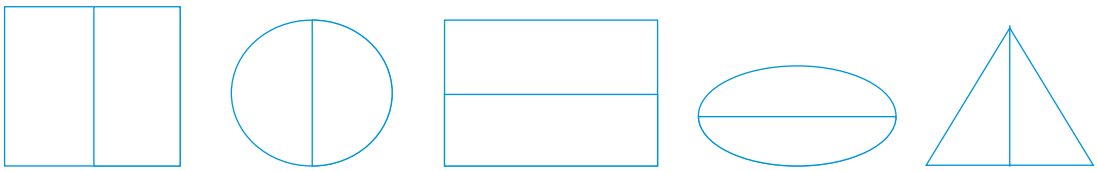
Look and practice how to write the fraction $\frac{1}{2}$.

(b) Drawing and shading one half of an object

Activity 4.1.4

Draw and shade $\frac{1}{2}$ (one half) on each shape.

a. b. c. d. e.



Activity 4.1.5

Draw a circle and shade $\frac{1}{2}$.

4.2 The fraction $\frac{1}{4}$

(a) Reading and writing the fraction $\frac{1}{4}$ (a quarter)

Activity 4.2.1

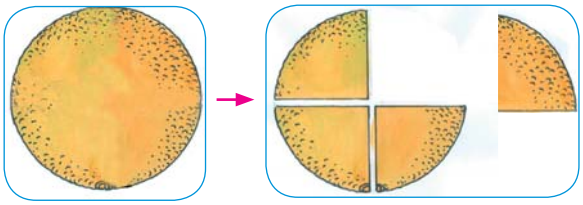
Take a full sheet of paper. Fold the paper in 4 equal parts. Separate them and discuss them with your colleagues.

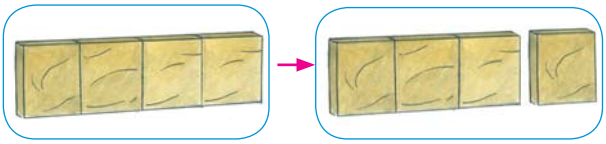
Activity 4.2.2

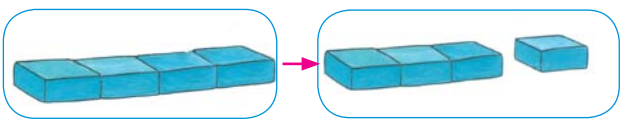
Take a full sheet of paper. Fold the paper in 4 equal parts. Shade one part and compare the shaded and un shaded part.

Activity 4.2.3

Study the pictures and give the name of the part of the full object.

a)  This is .... of the whole.

b)  This is .... of the whole.

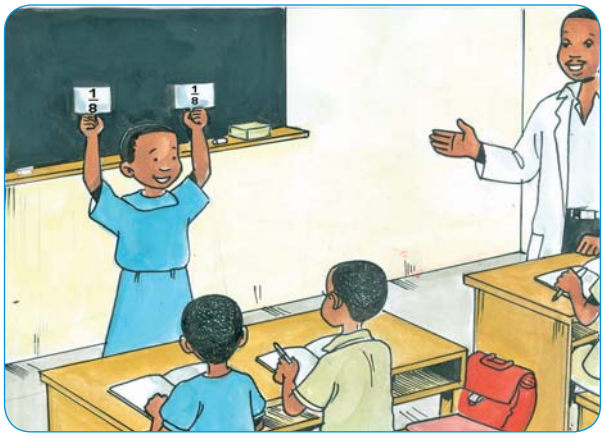
c)  This is .... of the whole

I have learnt that:

- An entire orange or an entire soap makes a whole.
- When it is cut into 4 equal parts, one part makes one quarter ($\frac{1}{4}$)
- $\frac{1}{4}$ is a fraction: one quarter, one or fourth.
- Four times of one quater ($\frac{1}{4}$) make a whole.

Activity 4.2.4

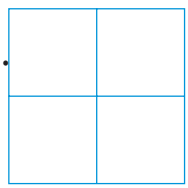
Look, say and write the fraction $\frac{1}{4}$.

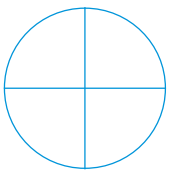


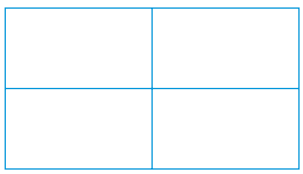
(b) Drawing and shading $\frac{1}{4}$ a quarter of an object

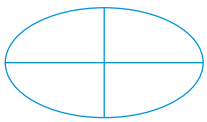
Activity 4.2.5

Draw and shade ($\frac{1}{4}$) (one quarter) of each picture.

a. 

b. 

c. 

d. 

Activity 4.2.6

Draw a circle and shade ($\frac{1}{4}$) of this circle. Discuss it with your friend.

4.3 The fraction $\frac{1}{8}$

(a) Reading and writing the fraction $\frac{1}{8}$

Activity 4.3.1

Take a full sheet of paper. Fold the paper in 8 equal parts. Separate them and discuss them with your friend.

Activity 4.3.2

Take a full sheet of paper. Fold the paper in 8 equal parts. Shade one part and compare the shaded and the un shaded part.

Activity 4.3.3

Look at the pictures and write the name for the part of the full object.

a)

b)

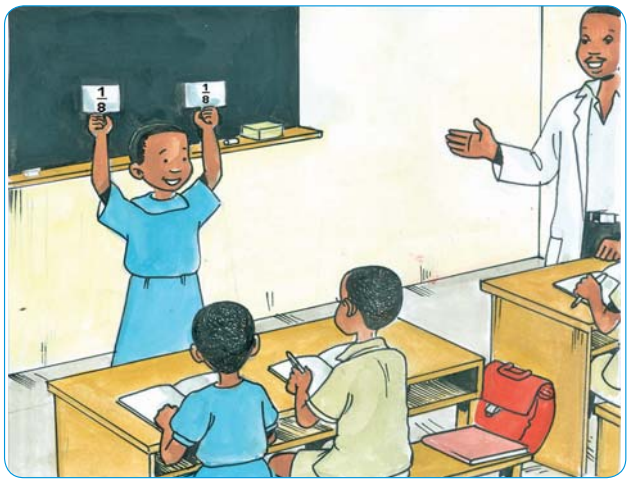
I have learnt that:

An entire orange or an entire suggar cane makes a whole.

- When it is cut into 8 equal parts, one part makes one eighth $\frac{1}{8}$.
- $\frac{1}{8}$ is a fraction: **one eighth**.
- Eight times of one eighth ($\frac{1}{8}$) make a whole.

Activity 4.3.4

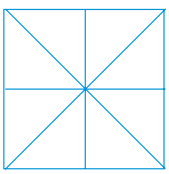
Look, say and write the fraction $\frac{1}{8}$.

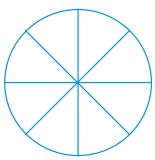


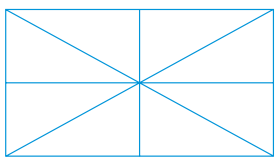
(b) Drawing and shading one eighth $\frac{1}{8}$ of an object

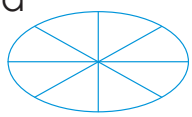
Activity 4.3.5

Draw and shade $\frac{1}{8}$ (one eighth) on each shape.

a 

b 

c 

d 

Activity 4.3.6

Draw a circle and shade ($\frac{1}{8}$) of this circle. Discuss it with your friends.

4.4 Parts of a fraction

Activity 4.4

Study the fraction and say the parts you see.

Fraction bar ← $\frac{1}{2}$ → 1 Numerator, 2 Denominator

I have learnt that:

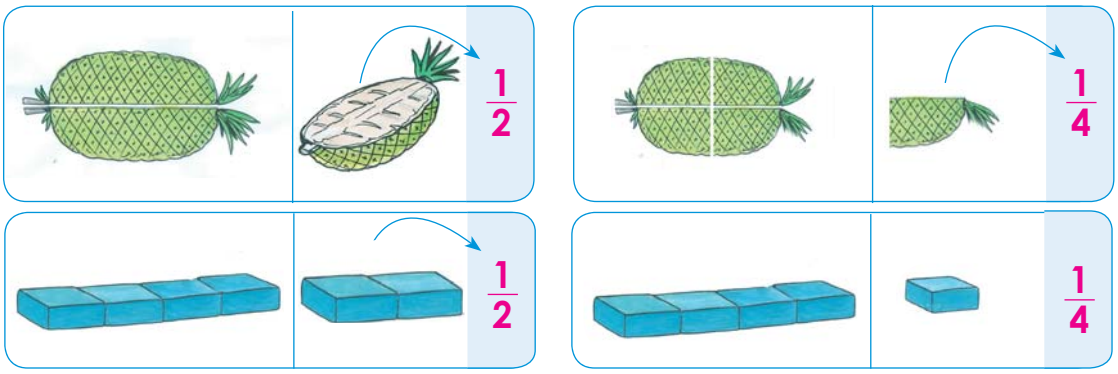
The number above the fraction bar is called **a numerator**

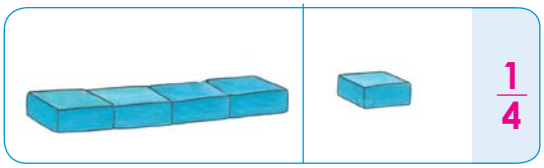
The number under the fraction bar is called **a denominator.**

4.5 Comparing fractions

Activity 4.5.1

Study the parts of these objects and compare using < > or = corectly





Compare using < > =

a) $\frac{1}{2}$ and $\frac{1}{4}$ of a pinaple

b) $\frac{1}{2}$ and $\frac{1}{4}$ of a soap

c) $\frac{1}{4}$ and $\frac{1}{8}$ of a soap

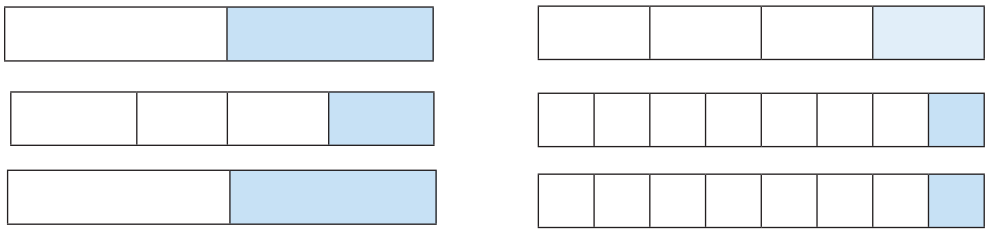
Activity 4.5.2

Study the fractions shown on the pictures below.
Write the fractions and compare them using >, < or = symbols.

a)

b)

c)



Activity 4.5.3

Study the examples and use ; < (less than), > (greater than) or = (equal to) to compare the fractions that follow

Examples

a) $\frac{1}{2} > \frac{1}{4}$ b) $\frac{1}{2} > \frac{1}{8}$ c) $\frac{1}{4} < \frac{1}{2}$ d) $\frac{2}{2} = \frac{8}{8}$

a) $\frac{1}{2}$ ☐ $\frac{2}{2}$

b) $\frac{2}{2}$ ☐ $\frac{4}{4}$

c) $\frac{1}{8}$ ☐ $\frac{1}{8}$

d) $\frac{2}{2}$ ☐ $\frac{8}{8}$

e) $\frac{1}{8}$ ☐ $\frac{1}{2}$

f) $\frac{1}{8}$ ☐ $\frac{1}{4}$

g) $\frac{1}{4}$ ☐ $\frac{1}{8}$

h) $\frac{1}{4}$ ☐ $\frac{1}{2}$

i) $\frac{8}{8}$ ☐ $\frac{4}{4}$

j) $\frac{1}{4}$ ☐ $\frac{4}{4}$

k) $\frac{2}{2}$ ☐ $\frac{1}{4}$

l) $\frac{4}{4}$ ☐ $\frac{1}{8}$

I have learnt that:

When comparing fractions with the same denominator;

- The fraction with the bigger numerator is the greater fraction;
- The Fraction with the smaller numerator is the small fraction.

4.6 Putting fractions together to make a whole

Activity 4.6

Study this picture carefully and tell your friend what you have seen?

Refer to this example and join together parts of a pawpaw, a pineaple, or parts of an orange to make a whole.

4.7 Importance of fractions

Activity 4.7

Carefully study this picture below. And ask your friends to tell you what they have seen in the picture.

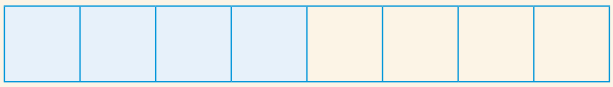
I have learnt that:

Fractions help us to know how we can share things equally with our friends.

END UNIT ASSESSMENT 4

1. **Write in words and in figures the fraction related to the shaded parts**

a)  .....

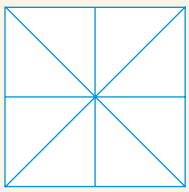
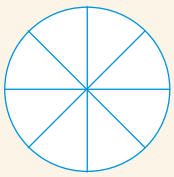
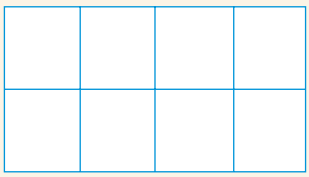
b)  .....

c)  .....

2. **Draw a circle, divide it into fractions and shade the part equivalent to:**

a) $\frac{1}{2}$ b) $\frac{1}{4}$ c) $\frac{1}{8}$

3. **Shade $\frac{1}{8}$ of the following picture**

a)  b)  c) 

4. **Use >,< or = to compare the following fractions**

a) $\frac{1}{2} \square \frac{8}{8}$ e) $\frac{8}{8} \square \frac{1}{8}$ i) $\frac{1}{4} \square \frac{4}{4}$

b) $\frac{2}{2} \square \frac{1}{4}$ f) $\frac{4}{4} \square \frac{1}{8}$ j) $\frac{2}{2} \square \frac{1}{8}$

c) $\frac{1}{4} \square \frac{1}{8}$ g) $\frac{1}{4} \square \frac{1}{2}$ k) $\frac{1}{8} \square \frac{1}{8}$

d) $\frac{4}{4} \square \frac{1}{2}$ h) $\frac{1}{8} \square \frac{2}{2}$ l) $\frac{8}{8} \square \frac{1}{4}$

5. Answer by "Yes" or "No"

(a) A whole of an object is equivalent to four times of $\frac{1}{4}$ of that object.

(b) In a fraction, the number above the fraction bar is called denominator.

(c) A whole object is equivalent to eight times of $\frac{1}{8}$ of that object…….

(d) In a fraction, the number above the fraction bar is called numerator……

(e) A whole of an object is equivalent to two times of $\frac{1}{2}$ of that object……

(f) The numerator and the denominator are separated by an horizontal line called fraction bar. ……

(g) I have $\frac{1}{4}$ of an orange, when Mutesi brings also $\frac{1}{4}$ of an orange we can put them together and get a whole. ……

(h) Fractions help us to share with our friends things or what we have.

(i) $\frac{1}{4}$ of an object is greater than $\frac{1}{2}$ of that object.....

(j) $\frac{8}{8}$ makes a whole as it is made by $\frac{2}{2}$ .....

(k) $\frac{4}{4}$ makes a whole as it is made by $\frac{8}{8}$ .....

(l) $\frac{1}{2}$ of an object is greater than $\frac{1}{8}$ of that object....

(m) $\frac{2}{2}$ makes a whole as it is made by $\frac{4}{4}$ .....

(n) $\frac{1}{4}$ of an object is greater than $\frac{1}{8}$ of that object....

Unit 5 Length measurements

5. 0 Preliminary activities

Activity 5.0.1

Discuss and make a list of objects which we can measure their length.

Activity 5.0.2

Use <, > or = to compare

a) 8 m ☐ 5 m
b) 5 m ☐ 5 m
c) 8 m ☐ 8 m
d) 4 m ☐ 7 m
e) 9 m ☐ 10 m
f) 7 m ☐ 7 m

Activity 5.0.3

Arrange the following measurements from the smallest to the largest.

a) 7 m, 5 m, 9 m
b) 6 m, 3 m, 8 m
c) 6 m, 1 m 7 m
d) 10 m, 2 m, 6 m
e) 9 m, 8 m, 5 m
f) 4 m, 7 m, 2 m

Activity 5.0.4

Carry out the following operations

a) 33m + 21m = ☐ m
b) 23m + 42 m = ☐ m
c) 56 m + 31m = ☐ m
(d) 86m – 51m= ☐ m
e) 85 m – 25 m = ☐ m
f) 41 m – 33 m = ☐ m
g) 35 m + 43 m = ☐ m
(h) 42 m + 51 m = ☐ m

Activity 5.0.5

Solve word problems

1. The chalkboard of our classroom has the length of 8m. The chalkboard of the neighboring classroom has the length of 6m. Find the total length of the two chalkboards.
2. Kaneza's garden has a length of 20 m. The garden of Mitari measures 18m. What is the total length for the two gardens?
3. On Monday, Mariza bought 14m of pieces of clothe. On Tuesday, she bought 13 m of the same cloth. The next day she bought 12m. Find the total length for the pieces of clothes she bought.
4. Mayira has a rope of 10m. His brother's rope has 19 dm. What is the total length for the two ropes?
5. Nshuti made a mat of 20 dm. Her sister Mutesi made a mat of 17 dm. What is the difference in the length of the two mats?
6. I made a rope of 72m. My father cut 12m from it to tie the banana plant and protect it against strong wind. What is the length of the remaing rope?
7. Munezero has a timber of 12m. Kagabo's timber measures 8 m. What is the total length for the two timbers?

5.1 Measuring the length of objects using a meter ruler

Activity 5.1

Carefully study the pictures below and say what the children are doing?

Do the following activity in groups :

1. Use a meter ruler and measure:
   (a) The length of your desk
   (b) The length of teacher's table
2. Use a meter ruler and measure:
   (a) The width of the teacher's cupboard
   (b) The width or the height of your blackboard
3. Use a meter ruler and measure: the perimeter of your classroom.
4. Use a meter ruler and measure:
   (a) The width of your classroom door .
   (b) The total length of two sides (length) of your classroom
5. Use a 30cm ruler and measure the length of notebooks and books, and other objects in your classrooms.

5.2 Dividing a meter into 10 equal parts

Activity 5.2

Look at the picture carefully and say, what are people doing in the picture below?

Do the following activities:

1. Get sugar cane of 1m long. Divide this cane in 10 equal parts.
2. Get a rope of 1m long. Cut it in 10 equal parts.
3. Get a thread of 1m long. Divide it in 10 parts of the same length.
4. Get a cloth measuring 1m long. Cut it in 10 equal parts.

I have learnt that:

- Length is the distance measured between two points.
- When the length of one meter (1m) is divided in 10 parts of the same length, each part measures one decimeter (1dm).
- Then, 1m equals to 10 decimeters. 1m = 10 dm

5.3 Dividing a decimeter into 10 equal parts

Activity 5.3

Look at the picture carefully and say what these people are doing?

In your groups do the following activities:

1. Take a rope of 1dm. Cut it in 10 equal parts.
2. Take a small tree of 1m. Divide it in 10 parts of the same length.

I have learnt that:

- When the length of one decimeter (1dm) 1) is divided in 10 parts of the same length, each part measures one centimeter (1cm);
- One meter (1m) divided in 10 equal parts, each part measures 1 decimeter, **1m = 10dm**;
- One meter (1m) divided in 100 equal parts, each part measures 1 centimeter, **1m = 100 cm**;
- One decimeter divided into 10 equal parts, each part measures 1 centimeter, **1dm = 10 cm**;
- The units of length get greater in the multiple of 10:
  1m = 10m, **1dm = 10 cm**
- The standard unit of length is the meter (m).

5.4 Conversion of Units of length

Activity 5.4.1

Study the conversion table for units of length. Use this table to convert the units that follow.

Example:

Meter (m)	Decimete (dm)	centimeter (cm)
1	0	
1	0	0
	1	0
1	0	
1	0	0

1m = 10 dm
10 dm= 1 m

1m = 100 cm
100 cm = 1m

1dm = 10 cm
10 cm = 1dm

a) 1m = ☐ dm
b) 3 dm = ☐ cm
c) 5 dm = ☐ cm
d) 27dm = ☐ cm

e) 90 dm = ☐ m
f) 2 dm = ☐ cm
g) 4 m = ☐ dm
h) 6 m = ☐ dm

i) 80 cm = ☐ dm
j) 7dm = ☐ cm

I have learnt that:

- Draw a conversion table;
- Fill in the units you have in the conversion table;
- The meter (m) is greater than a decimeter, a decimeter is greater than a centimeter;
- Add a zero (or multiply by ten) when you pass from a bigger unit to a smaller unit;
- Remove zero (or divide by ten when you pass from smaller unit to a bigger unit.

Let me convert units of length

a) 6 m = ...cm
b) 40 dm =... m
c) 75 dm = ...cm
d) 990 cm =... dm

5.5 Comparing lengths

Activity 5.5

Convert the lengths in the small unit and compare using >, < or = .

Example:

2 m = 20 dm

2 m = 20 dm

m	dm	cm
2	0	

a) 2 m = 20 dm
b) 90 cm ☐ 9 dm
c) 54 cm ☐ 54 dm
d) 15 m ☐ 150 dm
e) 14 dm ☐ 10 m
f) 150 cm ☐ 15 dm
g) 400 cm ☐ 4 m
h) 100 cm ☐ 10 dm
i) 13 dm ☐ 130 cm
j) 975 cm ☐ 9 m

I have learnt that:

When comparing lengths,

- Convert them in the same samall unit;
- Use <, >, or = to compare the values obtained.

5.6 Measuring the length round objects

Activity 5.6

Do the following activities and explain how you do it:

1. Use a meter ruler and measure the total length round your classroom.
2. Measure the length of 10 m in the playground.
3. Use a meter ruler and measure the length round a garden
4. Use a rope of 10 m to measure the length round the football pitch.

I have learnt that:

To measure the length round an object, you measure the length for each side and then you add them altogether.

5.7 Arranging lengths of objects

Activity 5.7.1

Arrange the lengths for objects from the shortest to the longest (from smallest to the biggest).

Example:

42 dm, 208 cm, 8 m

Answer

→ **8 m, 42 dm, 208 cm**

m	dm	cm
4	2	0
2	0	8
8	0	0

a) 45 dm, 7 m, 350 cm
e) 125 cm, 45 dm, 9 m
b) 79 dm, 130 m, 4 m
f) 76 cm, 4 m, 576 cm
c) 345 cm, 8 m, 65 dm
g) 127 cm, 45 dm, 9 m
d) 7 m, 985 cm, 75 dm
h) 65 dm, 9 m, 456 cm

Activity 5.7.2

Arrange the lengths for objects from the longest to the shortest (from the biggest to smallest).

Example:

4 m, 72 dm, 829 cm

Answer

→ **829 cm, 72 dm, 4 m**

m	dm	cm
4	0	0
7	2	8
8	2	9

a) 245 cm, 7 m, 35 dm
b) 79 cm, 3 m, 49 dm
c) 45 dm, 814 cm, 6 m
d) 78 dm, 895 cm, 7 m
e) 5 cm, 54 dm, 915 cm
f) 768 cm, 49 dm, 5 m
g) 27 dm, 458 cm, 9 m
h) 69 dm, 978 dm, 6 m

I have learnt that:

When ordering lenghs for objects;

- Convert all given units in the small unit;
- Arrange the converted lengths from the shortest to the longest or from the longest to the shotest.

5.8 Addition of lengths

Activity 5.8

Convert in the required unit of length before adding.
Follow this example and find the sum.

Example : **8m + 60cm = ...dm**

Required unit: dm

Answer: 8 m + 60 cm = 86 dm

m	dm	cm
8	0	
+ ↓	6	
8	6	

a) 100 cm + 77 cm = ☐ m

b) 15 dm + 500 cm = ☐ dm

c) 45 cm + 15 dm = ☐ cm

d) 23 dm + 170 cm = ☐ dm

e) 56 dm + 440 cm = ☐ cm

f) 7 m + 300 dm = ☐ m

g) 60 dm + 200 cm = ☐ m

h) 55 dm + 8 cm = ☐ cm

I have learnt that:

To add the lengths,

- Convert lengths in the required unit of length
- Add the converted lengths and write the answer.

5.9 Subtraction of units of lengths

Activity 5.9

Convert in the required unit of length before subtracting. Follow this example and find the difference

Example: **47 dm - 3 m = cm**

Required unit: cm

Answer: 47 dm - 3 m = 170 cm

m	dm	cm
4	7	0
3	0	0
1	7	0

a) 123 cm – 77 cm = ☐ cm

g) 56 dm – 440 cm = ☐ cm

b) 500 cm – 15 dm = ☐ dm

h) 7 m – 30 dm = ☐ dm

c) 4 m – 15 dm = ☐ cm

i) 67 dm –130 cm = ☐ dm

d) 23 dm –170 cm = ☐ dm

j) 55 dm – 88 cm = ☐ cm

e) 120 cm –70 cm = ☐ dm

k) 70 dm –200 cm = ☐ m

f) 600 cm – 50 dm = ☐ m

l) 600 cm – 300 cm = ☐ m

I have learnt that:

To subtract the lengths,

- Convert lengths in the required unit of length
- Subtract the converted lengths and write the answer.

5.10 Multiplication of units of length per a whole number

Activity 5. 10

Multiply and convert in the required unit of length

Example:

70 cm x 2 = 140 cm
140 cm = 14 dm
70 cm x 2 = 14 dm

m	dm	cm
	7	0
x		2
1	4	~~0~~

a) 71 cm × 4 = ☐ cm

b) 24 cm × 2 = ☐ cm

c) 43 m × 2 = ☐ dm

d) 90 cm × 5 = ☐ dm

e) 51 cm × 6 = ☐ cm

f) 11 dm × 3 = ☐ dm

g) 124 cm × 2 = ☐ dm

h) 8 m × 4 = ☐ dm

i) 30 dm × 5 = ☐ m

j) 22 dm × 4 = ☐ cm

k) 60 cm × 6 = ☐ dm

l) 14 cm × 2 = ☐ cm

I have learnt that:

When you multiply length by a whole number,

- Multiply the length in the given unit;
- Covert the obtained product in the required unit.

5.11 Division of length by a whole number

Activity 5. 11

Divide and convert in the required unit of length

Example: 960 cm ÷ 3 = ...dm

Solution: The required unit is dm

960 cm ÷ 3 = 320 cm

320 cm = 32 **dm**

960 cm ÷ 3 = 32 dm

$$\begin{array}{r} 320 \\ 3\overline{)\,960} \\ -\,9\downarrow \\ \hline 06 \\ -\,6\downarrow \\ \hline 00 \\ -\,0 \\ \hline 0 \end{array}$$

a) 480 dm ÷ 4 = ☐ dm

b) 126 cm ÷ 3 = ☐ cm

c) 240 cm ÷ 2 = ☐ cm

d) 720 dm ÷ 3 = ☐ m

e) 486 cm ÷ 2 = ☐ cm

f) 128 dm ÷ 2 = ☐ dm

g) 36 cm ÷ 6 = ☐ cm

h) 25 cm ÷ 5 = ☐ cm

i) 20 cm ÷ 5 = ☐ cm

j) 672 dm ÷ 6 = ☐ dm

k) 364 cm ÷ 4 = ☐ cm

l) 864 m ÷ 2 = ☐ m

I have learnt that:

When you divide length by a whole number,

- Divide the length in the given unit;
- Convert the obtained quotient in the required unit.

5.12 Word problems involving units of length

Activity 5. 12

Let us solve problems in group

Study this example on the word problem:

Example:

The distance between our classroom and the office of Headteacher is 45 dm. The distance between the office and the play ground is 55dm. Find the total distance in meters between our classroom and the playground.

Solution:

Distance between our classroom and the office of Headteacher: 45 dm

Distance between the office and the play ground : 55 dm

Distance between our classroom and the play ground: 45 dm + 55 dm =

The distance between our classroom and the play ground:

45 dm + 55 dm = **100 dm =10m** .

	m	dm	cm
	+ 4	5	
	5	5	
1	0	0	

The distance between our classroom and the play ground is 10 m.

Solve problems:

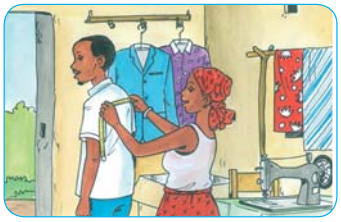
1. Last year I planted a tree with 50 dm of height. Today, the tree has 80dm. What is the difference in the height of this tree?
2. A carpenter bought a piece of timber measuring 100cm. He cut it into 5 equal parts. How long is each part?

3. Gatari bought a rope of 60 m. He wants to cut it in 3 equal ropes. What would be the length of each part.
4. Gatera had a field of 89m of length. Munezero's field had 97 m of length.
   (a) Between them, who had a longer field?
   (b) Find the difference between their fields?
5. The distance from our home to school is 420 dm. Convert this distance in m.

5.13 The uses of units of length

Activity 5.13.1

Study the activities and the materials that were used in the pictures below.


Note:

- Units of length are frequently used to measure the length for: objects, sides of fields, roads, height of houses, etc.
- To measure the length we use: a meter ruler; Tape meter for tailors, afolding ruler or Yard stick for carpenters.
- To measure the length round an object, you measure the length for each side and then you add them altogether.

Activity 5.13.2

Discuss the use of units of length.

Activity 5.13.3

Discuss the use of units of length and where you can use them.

5. 14 END UNIT ASSESSMENT 5

1. Comment by Yes or No

(a) The length for my class table is 100 cm .....

(b) The meter is the standard unit of length measurement.....

(c) We use the tape meter to measure the length of a cloth. .....

(d) Units of length help us to find the measurement of length for objects.....

(e) I use a meter ruler to measure the length for my notebook. .....

(f) The units of length vary from one the next in the multiple of ten.....

2 Use a conversion table to convert

(a) 7m = ...dm

(b) 850 cm = ...dm

(c) m 5 = ...dm

(d) 600 cm =....dm

(e) 70 dm = ... m

(f) 900 cm = ...dm

(g) 9dm = ...cm

(h) 78dm = ...cm

(i) 450 cm = ...dm

(j) 9m = ...dm

3. Use <, > or = to compare lengths

(a) 6 m 8 dm 5cm ☐ 685 cm

(b) 9 m 8 dm ☐ 980 cm

(c) 650 cm ☐ 75 dm

(d) 65 dm ☐ 75 cm

(e) 689 cm ☐ 7 m

(f) 9 m ☐ 678 cm

4. **Arrange the lengths for objects from the shortest to the longest: 9 m, 75 dm, 8 m, 85 dm.**

5. **Arrange the lengths for objects from the longest to the shortest: 756 cm, 87 dm, 967 cm, 68 dm.**

6. **Work out:**

   (a) 6 m + 9 dm = ☐ cm

   (b) 500 cm + 80d m = ☐ m

   (c) 987 cm – 9 m 8dm = ☐ cm

   (d) 9 m 7 cm – 9m 7cm = ☐ dm

   (e) 848 m ÷ 4 = ☐ m

   (f) 750 dm ÷ 5 = ☐ m

   (g) 90 cm × 5 = ☐ dm

   (h) 72 cm × 4 = ☐ cm

7. **Word problems**

   (a) Gisa walks on foot to go to visit his friend. He covers a distance of 45m. Convert this distance in dm.

   (b) Keza bought a long cloth of 79m. She sold 70 dm from it. How long is the remaing piece of cloth cloth?

   (c) Mucuruzi bought a cloth of 75m. He divided it in 5 equal parts. Find the length for each part.

   (d) During the running race, the competitor Gwiza made 100m in 6 consecutive periods. Find the total length covered by Gwiza.

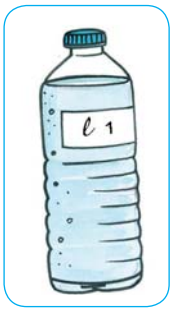
Unit 6

Litre, the standard unit of capacity measurements

6.1 The litre as a measuring tool

Activity 6.1

Carefully look at the following containers; discuss their names, the content and their quantity.

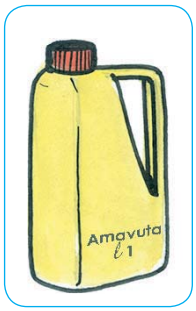


Water: 1ℓ

Milk:1ℓ

Fuel: 2ℓ

Juice: 1ℓ



Oil: 1ℓ

Beer: 1ℓ

6.2 Measuring liquids

Activity 6.2 1

Carefully study the picture below,
What are children doing?
Try to do the same activity.

Activity 6.2 2

Use bottles or jerry cans with different capacity: one for 5 ℓ and others with 1 ℓ.
Fill water in the jerry can of 5 ℓ, use these water to fill in different bottles of 1 ℓ. How many bottles of 1 ℓ will fill a 5 ℓ jerry can?

Activity 6.2 3

Take a jerry can of 2 ℓ. Use a bottle of 1 ℓ to fill water in the jerry can. How many bottles of water do you use to fill the jerry can?

Do the same to fill a jerry can of 10 ℓ. How many 1 ℓ bottles of water will you need to fill the jerry can?


1 litre of nineral water

6.3 Comparing containers of liquids

Activity 6.3.1

Use jerry cans, jugs, bottles and cups. Group containers of the same capacity. Explain to each other the capacity for each group.

Compare the capacity for containers using : <, > or =

Activity 6.3.2

a) 15 ℓ ☐ 24 ℓ
b) 32 ℓ ☐ 712 ℓ
c) 345 ℓ ☐ 453 ℓ
d) 750 ℓ ☐ 697 ℓ
e) 315 ℓ ☐ 351 ℓ
f) 225 ℓ ☐ 175 ℓ
g) 167 ℓ ☐ 256 ℓ
h) 791 ℓ ☐ 719 ℓ
i) 405 ℓ ☐ 405 ℓ
j) 819 ℓ ☐ 891 ℓ

Activity 6.3.3

Arrange the following capacities from the smallest to the biggest

a) 15 ℓ, 20 ℓ, 12 ℓ, 10 ℓ
b) 12 ℓ, 2 ℓ, 18 ℓ, 5 ℓ
c) 13 ℓ, 20 ℓ, 7 ℓ, 15 ℓ
d) 24 ℓ, 5 ℓ, 20 ℓ, 8 ℓ
e) 22 ℓ, 10 ℓ, 25 ℓ, 6 ℓ
f) 23 ℓ, 15 ℓ, 7 ℓ, 6 ℓ

Activity 6.3.4

Arrange the following capacities from the biggest to the smallest

a) 51 ℓ, 20 ℓ, 21 ℓ, 12 ℓ
b) 21 ℓ, 28 ℓ, 81 ℓ, 52 ℓ
c) 31 ℓ, 20 ℓ, 75 ℓ,15 ℓ
d) 42 ℓ, 25 ℓ, 20 ℓ, 68 ℓ
e) 22 ℓ, 30 ℓ, 52 ℓ, 65 ℓ
f) 32 ℓ, 15 ℓ, 72 ℓ, 36 ℓ

6.4 Addition of capacities in litres

Activity 6.4.1

1) A bottle contains 5 ℓ, a jerry can contains 20 ℓ. If you fill these two quantities of water in a small tank, how many litters do you get in the tank?

2) Follow this example carefully and answer to the questions that follow.

Example:

172 ℓ + 124 ℓ =
152 ℓ + 38 ℓ =
172 ℓ + 38 ℓ =

$$\begin{array}{r} 172\ \ell \\ +124\ \ell \\ \hline 296\ \ell \end{array} \qquad \begin{array}{r} {\scriptstyle 1\ \ } \\ 152\ \ell \\ +\ 38\ \ell \\ \hline 190\ \ell \end{array} \qquad \begin{array}{r} {\scriptstyle 1\ 1\ \ } \\ 172\ \ell \\ +\ 38\ \ell \\ \hline 210\ \ell \end{array}$$

a) 18 ℓ + 12 ℓ = ☐

b) 33 ℓ + 28 ℓ = ☐

c) 281 ℓ + 169 ℓ = ☐

d) 615 ℓ + 204 ℓ = ☐

e) 186 ℓ + 512 ℓ = ☐

f) 37 ℓ + 63 ℓ = ☐

g) 176 ℓ + 78 ℓ= ☐

h) 342 ℓ+ 58 ℓ= ☐

i) 475 ℓ + 215 ℓ = ☐

j) 317 ℓ + 623 ℓ = ☐

6.5 Word problems involving the addition of capacity measurements

Activity 6. 5

Careffully study the worked out example below and answer the questions that follow :

Example:

We have two tanks of water. The first contains 213 ℓ, the second 378 ℓ. How many liters are in both tanks?

Solution:

The first tank: 213 ℓ

The second tank: 378 ℓ.

Both tanks: 213 ℓ +378 ℓ =

There are 591 ℓ in the two tanks.

$$\begin{array}{r} 213\ \ell \\ +\ 378\ \ell \\ \hline 591\ \ell \end{array}$$

Solve the following problems:

1) I use a container of 15 to fetch water. My brother uses a container of 24 . Find the amount of water we fetch at once.
2) At home we organized a party and my parents prepared 300 ℓ of sorghum beer. Our neighbors brought a contribution of 175 ℓ. How much beer did we use in the party?

3) The generator of Mutabazi uses a fuel to generate electricity. This generator uses 195 ℓ of fuel in the morning and 205 ℓ in the afternoon. Find the amount of fuel the generator uses per day.

6.6 Subtraction or difference of capacities in litres

Activity 6. 6.1

1) Take a jerry can containing 5 of water. From this water, pour 1 in a bottle. How much water is remaing in the jerry can?

2) Look at the example below carefully and answer to the next questions

Example:

723 ℓ - 312 ℓ = ℓ 411
423 ℓ - 309 ℓ = ℓ 114

$$\begin{array}{r} 723\ \ell \\ -\ 312\ \ell \\ \hline 411\ \ell \end{array} \qquad \begin{array}{r} {\scriptstyle 1\,1} \\ 423\ \ell \\ -\ 309\ \ell \\ \hline 114\ \ell \end{array}$$

a) 45 ℓ - 29 ℓ = ☐
b) 112 ℓ - 89 ℓ = ☐
c) 234 ℓ - 197 ℓ = ☐
d) 678 ℓ - 178 ℓ = ☐
e) 975 ℓ - 485 ℓ = ☐
f) 125 ℓ - 95 ℓ = ☐

6.7 Word problems involving addition and subtraction of capacities

Activity 6. 7

Study the worked out example below:

Example:

There were 225 ℓ of water in the tank. Today we used 75 ℓ of water from this tank. How much water left in the tank?

Solution:

In the tank there were: 225 ℓ

We used : 75 ℓ.

There left: 225 ℓ -75 ℓ =

There left 150 ℓ of water

$$\begin{array}{r} {\scriptstyle 1\,1} \\ 225\ \ell \\ -\ \ 75\ \ell \\ \hline 150\ \ell \end{array}$$

Solve the following problems:

1) Yesterday we have 225 ℓ of water. We used this water to wash our clothes and we remain with 24 ℓ. How much water did we use to wash clothes?

2) The oil seller had 100 ℓ of oil. In this morning she sold 35 ℓ. Find the amount of oil which left.

6.8 Multiplication of units of capacity per a whole number

Activity 6. 8

Refer to this example and find the answer for next questions

Example:

72 ℓ x 4 = 288 ℓ

$$\begin{array}{r} 72\ \ell \\ \times\ \ 4 \\ \hline 288\ \ell \end{array}$$

a) 24 ℓ x 2 = ☐

b) 32 ℓ x 4 = ☐

c) 31 ℓ x 6 = ☐

d) 74 ℓ x 2 = ☐

6.9 Word problems involving multiplication of capacities per a number of times

Activity 6. 9

Carefully study the example below:

Example:

Butera fetches 4 jerry cans of water per day. If each jerry can contains 10 ℓ , How many liters does Butera fetch per day?

Solution:

One jerry can contains: 10 ℓ
Number of jerry cans: 4 ℓ
Total number of liters: 10 ℓ x 4 =
Butera fetches 40 ℓ of water per day.

$$\begin{array}{r} 10\ \ell \\ \times\ \ 4 \\ \hline 40\ \ell \end{array}$$

Solve the following problems:

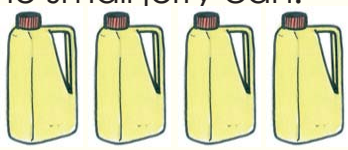
1) We use 61 ℓ of water per day for washing the house. How much water do we use in 5 days?
2. A Kind woman shared 72 ℓ of cooking oil equally to 3 families. How much oil does each family get?

6.10 Division of capacity measurements by a whole number

Activity 6.10

1) Take a big jerry can full of 20 of water. When you pour this water in small jerry cans of the same size, the water fills 4 jerry cans only.
Find the the quantity of water that fills one small jerry can.

2) Carefully study the example below and find the answer for next questions



Example:

255 ℓ ÷ 5 = 51 ℓ

$$\begin{array}{r} 51 \\ 5\overline{)\ 255\ell} \\ -\ 25\downarrow \\ \hline 005 \\ -\ 5 \\ \hline 0 \end{array}$$

a) 68 ℓ ÷ 2 =

b) 188 ℓ ÷ 2 =

c) 159 ℓ ÷ 3 =

d) 324 ℓ ÷ 6 =

6.11 Word problems involving the division of capacity measurements by a whole number

Activity 6. 11

Study the worked out example below:

Example:

Dushime 20 ℓ of water. He pours this water in different small jerry cans of 5 ℓ. How many 5 ℓ jerry cans will be filled by the water from the big jerry can.

Solution:

The big jerry can contains: 20 ℓ
The small jerry can has: 5 ℓ
The number small jerry cans: 20 ℓ ÷ 5 =
The watter will be pulled in 4 small jerry cans.

$$\begin{array}{r|l} & 4 \\ \hline 5\ell & 20\ell \\ & -\ 20 \\ \hline & 00 \end{array}$$

Solve the following problems:

1. Five children had a birth day on the same day. Their parents bought 50 ℓ of juice and shared it equally among their children. Find the quantity of juice given to each child.
2. Share 186 ℓ equally among 6 milk collection centers. How much milk will each center get?
3. Mugabo has 155 ℓ of fuel. If he pours this fuel equally in 5 vehicles, find the quantity of fuel for each vehicle.

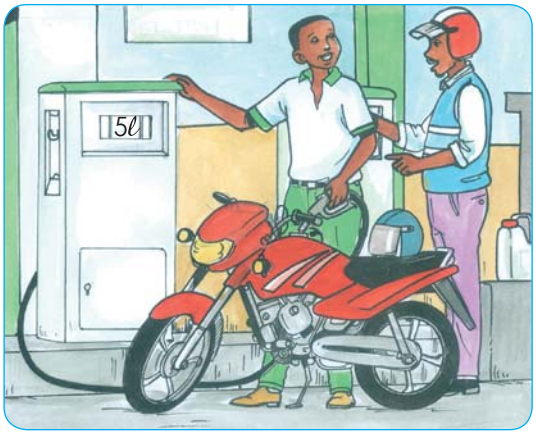
6.12 Importance of capacity measurements

Activity 6.12.1

Study the picture carefully and say what you are seeing?

a

b



List and explain where liters are used in real life.

Activity 6.12.2

Discuss advantages of using liters when measuring the quantity of liquids.

Activity 6.12.3

Name some of the containers for liquids used at home. For each container, write its capacity in liters.

I have learnt that:

- **The liter is the standard unit of capacity measurements**
- **Liter** is used to measure the quantity of liquids such as: milk, water, cooking oil, fuel, petrol, juice, beer, etc.

END UNIT ASSESSMENT 6

1. Comment by Yes or No

(a) Liter is the standard unit of measuring the capacity of liquids…….

(b) We use the liter to measure the length of a field…..

(c) Liter is used to measure the quantity of liquids such as water……..

2. Use <, > or = to compare

(a) 586 ℓ ☐ 856 ℓ

(b) 549 ℓ ☐ 478 ℓ

(c) 287 ℓ ☐ 287 ℓ

(d) 918 ℓ ☐ 908 ℓ

3. Arrange the capacity of measurements for objects from the lightest to the heaviest

785 ℓ, 758 ℓ, 857 ℓ, 875 ℓ, 578 ℓ, 587 ℓ.

4. Arrange the capacity measurements for objects from the heaviest to the lightest.

908 ℓ, 890 ℓ, 980 ℓ, 809 ℓ.

5. Find the answer

(a) 548 ℓ + 387 ℓ =

(b) 81 ℓ x 5 =

(c) 978 ℓ - 789 ℓ =

(d) 720 ℓ ÷ 4 =

6. Problems

(a) There are 975 ℓ of water in a tank. If I use 789 ℓ to wash clothes, how much water remained in the tank?

(b) Kirabo has 20 of petrol. She wants to keep them in the small jerry cans with the capacity of 5 ℓ. How many jerry cans will she use?

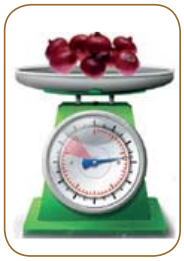
(c) Our tank of water is filled by 6 drums. How much water can fill the tank if each drum has 91 ℓ.

Unit 7 Kilogram, the standard unit of mass

7.1 The Kilogram as the standard unit of mass

Activity 7.1

Study the following pictures carefully; and say the measurements seen on the table

a. 

b. 

We measure mass in kilograms (Kg).

Give another way of measuring mass.

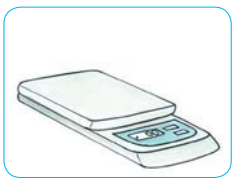
I have learnt that:

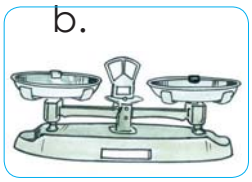
Kilogram (Kg) is the standard unit of mass of an object. The value of mass in Kg shows that the object is light or heavy.

7.2 Balances and their types

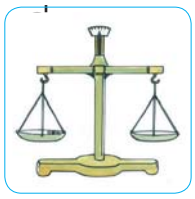
Activity 7.2

Study the pictures of balances below .
Name the different types of balances shown below.

a. 
Electronic Balance

b. 
Beam balance

c. 
String balance


Bouble beam balance

I have learnt that:

- We use the balance to measure the mass of objects;
- There are different types of balances;
- The most common balances are: the double beam balance, the string balance and the electronic balance.

7.3 Measuring masses of objects in Kg

Activity 7.3.1

Lift different objects and say which is **lighter** and which is **heavier**.

Activity 7.3.2

Look at the picture carefully and say what children are doing ?

Do the same and read the mass of different objects in Kilograms and record masses on a balance.

Activity 7.3.3

Look at the picture and say the activities taking place in the pictures

a. 

b. 

c. 

d. 

e. 

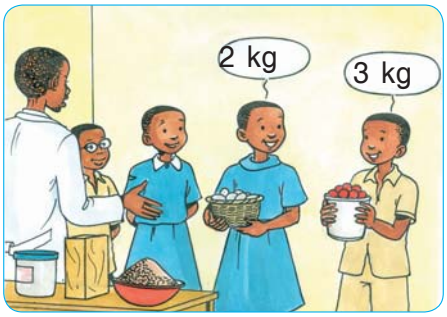
f. 

Activity 7.3.4

Lift object whose mass does not exceed **10Kg** and estimate its mass; Then, use a balance to measure and verify its exact mass.

Write down the mass of each object you measure.

a.

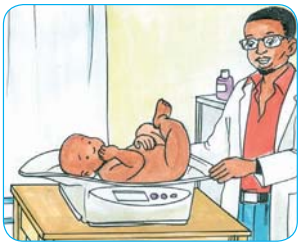


b.

7.4 Importance of Kilogram (Kg)

Activity 7.4.1

Look at the pictures.
What do you see in the pictures?
Tell your friends where you saw people using the balances.



Activity 7.4.2

Why is it good to use Kg when measuring the mass?

Activity 7.4.3

Tell your friends the problems we get when we buy items without measuring their mass to know the number of Kg or weight.

I have learnt that:

- The standard unit of mass is Kilogram (Kg).
- Kg is used to measure the exact mass of objects.
- Before paying money to buy some objects, we decide to ask the seller to use a balance so as we may verify if the required mass is exact.

7.5 Comparing masses of objects

Activity 7.5.1

Read carefully and discuss with your friends .

Keza and Gisa made a competition of peeling beans. After finishing, they used the balance to measure beans peeled by each one.

They realized that Keza peeled **3Kg** while Gisa peeled **2Kg.** Then, Gisa decided to work hard to win the competition for next time.

Activity 7.5.2

Consider objects of different weights; Select those with the same mass, objects which are heavy and others which are light.

Activity 7.5.3

Using <, >, or = to compare the following:

a) 51 kg ☐ 42 kg

b) 23 kg ☐ 172 kg

c) 354 kg ☐ 345 kg

d) 252 kg ☐ 157 kg

e) 176 kg ☐ 526 kg

f) 179 kg ☐ 179 kg

Activity 7.5.4

Arrange the following masses from the lightest to the heaviest mass

a) 51 kg, 26 kg, 21 kg

b) 21 kg, 12 kg, 81 kg

c) 31 kg, 24 kg, 47 kg

d) 42 kg, 25 kg, 27 kg

e) 28 kg, 40 kg, 52 kg

f) 32 kg, 51 kg, 57 kg

Activity 7.5.5

Arrange the following masses from the heavies to the lightest mass

a) 15 kg, 27 kg, 12 kg

b) 21 kg, 82 kg, 18 kg

c) 31kg, 28kg, 75 kg

d) 24 kg, 52 kg, 29 kg

e) 27 kg, 37 kg, 25 kg

f) 23 kg, 15 kg, 72 kg

I have learnt that :

When comparing or arranging the mass measurements,

- Consider numbers that show the values in Kg;
- Compare and arrange these numbers: the small number shows the light mass, the big number shows the heavy mass.

7.6 Addition of masses in kilogram

Activity 7. 6

Let us refer to the example and add masses

Example: 205 kg + 414 kg =

205 kg + 414 kg = **619 kg**

$$\begin{array}{r} 205\ \text{kg} \\ +\ 414\ \text{kg} \\ \hline 619\ \text{kg} \end{array}$$

a) 81 kg + 11 kg = ☐ kg

b) 33 kg + 82 kg = ☐ kg

c) 128 kg + 196 kg = ☐ kg

d) 73 kg + 36 kg = ☐ kg

e) 167 kg + 87 kg = ☐ kg

f) 234 kg + 85 kg = ☐ kg

7.7 Word problems involving the addition of mass measurements

Activity 7. 7

Let us refer to the example and solve problems

Look at the worked out example below:

Example:

I weigh 32Kg; my brother weighs 46Kg. Find our total weight?

Solution:

My mass: 32 Kg
The mass of my brother: 46Kg.
The total mass: 32Kg + 46 Kg =
Our total weight is 78 Kg.

$$\begin{array}{r} 32\ \text{kg} \\ +\ 46\ \text{kg} \\ \hline 78\ \text{kg} \end{array}$$

Solve the following problems:

1. Last month Kamanzi kept 12Kg of cassava in the store. His brother kept15 Kg of cassava. How much cassava did they save altogether?
2. One day, Rukundo sold 50Kg of rice in the morning. In the afternoon, he sold 25Kg of rice. How much rice did Rukundo sell on the same day?
3. At home we cook 5Kg of bananas in the morning. In the evening we cooked 4 Kg of bananas. Find the mass of bananas we cook per day.
4. Every day Mbabazi sells 15Kg of sugar and 25Kg of sorghum flour. Find the total number of Kg Mbabazi sells per day.

7.8 Subtraction of units of mass in Kg

Activity 7. 8

Let us refer to the example and do the subtraction

Example: 475 kg - 364 kg =

475 kg - 364 kg = **111kg**

$$\begin{array}{r} 475\ \text{kg} \\ -\ 364\ \text{kg} \\ \hline 111\ \text{kg} \end{array}$$

a) 54 kg – 29 kg = ☐ kg

b) 215 kg – 59 kg = ☐ kg

c) 121 kg– 98 kg = ☐ kg

d) 217 kg – 191kg = ☐ kg

e) 324 kg – 179 kg = ☐ kg

f) 546 kg – 329 kg = ☐ kg

7.9 Word problems on the subtraction of units of mass

Activity 7. 9

Let us refer to the example and solve problems

Study the worked out example below:

Example:

I poured **28Kg** of rice in a sack that requires **59 Kg** to be filled. How many Kg are needed to fill the sack?

Solution:

Total mass needed : 59 Kg
The mass I poured in: 28 Kg.
The missing mass: 59 Kg - 28 Kg =
Our total weight is 31 Kg.

$$\begin{array}{r} 59\ \text{kg} \\ -\ 28\ \text{kg} \\ \hline 31\ \text{kg} \end{array}$$

Solve the following problems:

1. A businessman had 150Kg of beans. He sold 75 Kg from them. How many kilograms of beans did he remain with?
2. Gisa harvested 247Kg of rice. He gave his neighbors 130 Kg of rice. **How many kilogram of rice did he remain with?**

7.10 Multiplication of mass measurements by a whole number

Activity 7. 10

Let us refer to the example and do the multiplication

Example: 82 kg x 4 =

82 kg x 4 = 328 kg

$$\begin{array}{r} 82\ \text{kg} \\ \times\ 4\ \text{kg} \\ \hline 328\ \text{kg} \end{array}$$

a) 42 kg × 3 = ☐ kg
b) 93 kg × 2 = ☐ kg
c) 81 kg × 6 = ☐ kg
d) 53 kg × 4 = ☐ kg
e) 54 kg × 5 = ☐ kg
f) 15 kg × 6 = ☐ kg

7.11 Word problems involving multiplication of mass measurements by a whole number

Activity 7. 11

Let us refer to the example and solve problems

Study the example below:

Example:

My parents harvested 6 sacks of beans. Each sack weighs **71Kg**. How many kilograms of beans did my they harvest?

Solution:

One sack weighs : 71 Kg

Number of sacks: 6

Total number of Kg: 71 Kg x 6 = 426Kg

Parents harvested 426 Kg .

$$\begin{array}{r} 71\ \text{kg} \\ \times\ 6 \\ \hline 426\ \text{kg} \end{array}$$

Solve the following problems:

1) At home we cook 6 Kg of potatoes. How much potatoes do we cook in 3 days?
2) Mugabo carries 61 Kg of bananas on the wheelbarrow. How many kilograms will he have if he caries bananas 3 times?
3) When preparing breads, Muhizi uses 31Kg of millet flour per day. How many kilogram of millet flour will he use in 10 days?

7.12 Division of mass measurements by a whole number

Activity 7. 12

Let us refer to the example and do the division

Example: 75 kg ÷ 3 =

75 kg ÷ 3 = 25 kg

$$
\begin{array}{r|l}
3 & 25\ \text{kg} \\
\hline
 & 75\ \text{kg} \\
 & -\ 6\downarrow \\
 & \underline{15} \\
 & -15 \\
 & \underline{00}
\end{array}
$$

a) 4 kg ÷ 2 = ☐ kg

b) 84 kg ÷ 4 = ☐ kg

c) 75 kg ÷ 5 = ☐ kg

d) 95 kg ÷ 5 = ☐ kg

e) 220 kg ÷ 4 = ☐ kg

f) 655 kg ÷ 5 = ☐ kg

g) 864 kg ÷ 6 = ☐ kg

h) 624 kg ÷ 4 = ☐ kg

i) 66 kg ÷ 6 = ☐ kg

j) 99 kg ÷ 3 = ☐ kg

k) 35 kg ÷ 5 = ☐ kg

l) 624 kg ÷ 6 = ☐ kg

m) 216 kg ÷ 3 = ☐ kg

n) 486 kg ÷ 2 = ☐ kg

o) 369 kg ÷ 3 = ☐ kg

p) 848 kg ÷ 4 = ☐ kg

7.13 Word problems involving the division of mass measurements by a whole number

Activity 7. 13

Let us refer to the example and solve the problem

Discuss the example below:

Example:

Share 488Kg of maize flour to 4 families. How many Kg will each family get?

Solution:

Quantity of maize flour: 488Kg
Number of families: 4
Number of Kg per family: 488 Kg ÷ 4 =
Each family will get: 122Kg

$$
\begin{array}{r|l}
 & 122\ \text{kg} \\
\hline
4 & 488\ \text{kg} \\
 & -\ 4 \\
\hline
 & 08 \\
 & -\ 8 \\
\hline
 & 08 \\
 & -\ 8 \\
\hline
 & 0
\end{array}
$$

Solve the following problems:

1. Share 450 Kg of rice equally among 5 people. How many kilograms will each person get?
2. Four people bought 328 Kg of sugar to be shared equally among them. Find the share for each person?
3. There are 284 Kg of beans to be shared equally in 4 sacks. What is the mass for each sack?
4. During the harvesting of beans, a mother got 48Kg. She equally shared this harvest among 4 children. What was the share of each child?
5. At home we use 30Kg of potatoes in 5 days. How many kilograms of potatoes do we use in one day?

END UNIT ASSESSMENT 7

1. Comment by **Yes** or **No**

(a) Kg is the standard unit of mass measurements.....

(b) Kg is used to measure the capacity of objects.....

(c) Use the liter when you want to measure the mass for objects ℓ.

2. Give 3 types of balances.

3. **Use <, > or = to compare masses =**

(a) 721 kg ☐ 271 kg (b) 657 kg ☐ 756 kg

(c) 74 kg ☐ 74 kg (d) 67 kg ☐ 76 kg

(e) 582 kg ☐ 532 kg (f) 659 kg ☐ 559 kg

4. **Arrange the mass measurements for objects from the lightest to the heaviest mass**

478 kg, 874 kg, 487 kg, 784 kg, 847 kg, 748 kg

5. **Arrange the mass measurements for objects from the heaviest to the lightest mass**

836 kg, 368 kg, 638 kg, 863 kg, 386 kg, 683 kg

6. **Find the answer**

(a) 645 kg + 294 kg = ☐ kg

(b) 809 kg + 178 kg = ☐ kg

(c) 738 kg – 598 kg = ☐ kg

(d) 696 kg – 467 kg = ☐ kg

(e) 995 kg ÷ 5 = ☐ kg

(f) 960 kg ÷ 6 = ☐ kg

(g) 92 kg × 4 = ☐ kg

(h) 72 kg × 3 = ☐ kg

7. Solve word problems

(a) Abatoni bought 6 sacks of cement. If one sack weighs 50Kg, Find the number of Kg she bought.

(b) During the beginning of season B of Agriculture, Rwema shared 85Kg equally to his 5 children. Find the quantity for each child.

(c) In the first season of farming we got a harvest of 356 kg of rice. In the second season we got 278 Kg and we got 319 Kg in the third season. Find the total harvest we got in these three seasons.

(d) The store of our school had 895Kg of beans. If the school used 547 Kg of beans for students' meal, find the quantity of beans which remained in the store.

(e) Last year I got 21Kg of rice as a harvest. In this year I got 185 Kg of rice. Find my total harvest for these two years.

(f) Share 472 Kg of sugar equally to 4 families; How much sugar will each family get?

(g) Kamana weighs 45Kg. His sister weighs 55Kg. Find the total weight for Kamana and his sister.

Unit 8 Rwandan currency from 1Frw up to 1000Frw

8.0 Preliminary activities

Activity 8.0.1

Use <, > and = to compare Rwandan currency

a) 50 Frw ☐ 50 Frw

b) 25 Frw ☐ 35 Frw

c) 95 Frw ☐ 85 Frw

d) 45 Frw ☐ 70 Frw

e) 75 Frw ☐ 100 Frw

f) 70 Frw ☐ 70 Frw

Activity 8.0.2

Arrange from the smallest to the largest amount.

a) 75 Frw, 50 Frw, 90 Frw

b) 90 Frw, 80 Frw, 50 Frw

c) 100 Frw, 20 Frw, 60 Frw

d) Frw 60, 100 Frw, 70 Frw

e) 60 Frw, 30 Frw, 80 Frw

f) 40 Frw, 70 Frw, 20 Frw

Activity 8.0.3

Arrange from the smallest to the largest amount.

a) 75 Frw, 50 Frw, 90 Frw

b) 90 Frw, 80 Frw, 50 Frw

c) 100 Frw, 20 Frw, 60 Frw

d) 45 Frw, 15Frw, 50 Frw

e) 60 Frw, 75 Frw, 35Frw

f) 60 Frw, 100 Frw, 70 Frw

g) 60 Frw, 30 Frw, 80 Frw

h) 40 Frw, 70 Frw, 20 Frw

i) 25 Frw, 100 Frw, 65 Frw

j) F70 Frw, 35 Frw, 90 Frw

Activity 8.0.4

Find correct answer

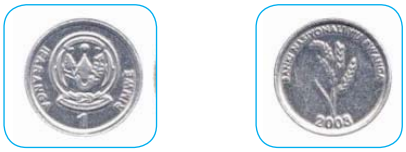
a) 35 Frw + 25 Frw =
b) 25 Frw + 45 Frw =
c) 55 Frw + 35 Frw =
d) 75 Frw - 25 Frw =
d) 85 Frw – 45 Frw =
e) 45 Frw – 35 Frw =
f) 35 Frw + 45 Frw =
h) 95 Frw - 65 Frw =

Activity 8.0.5

Word problems:

1. Kariza had a coin of 100Frw. She bought a sweet at 50 Frw. What was her balance?
2. Keza was given 80Frw by her parents. If she got 20Frw more. How much money did she get?
3. Kayitare was given 100Frw . He bought a pen at 50Frw and a banana at 40Frw. How much money did he remain with?
4. Peter bought a pencil at 20Frw and a mango at 50Frw. How much money did he use altogether?
5. Mutesi had 100Frw. She bought a pen and paid 50Frw. How much money was left?

8.1 Features of Rwandan currency from 1Frw to 1000Frw

Rwandan coin	Features
	**A coin of 1 franc** - Silver color - Branch of wheat - Coat of arm
	**A coin of 5 francs** - Copper color - Branch of coffee - Coat of arm

 	**A coin of 10 francs** - Copper color - Banana tree - Coat of arm
 	**A coin of 20 francs** - Silver color - Branch of tea - Coat of arm
 	**A coin of 50 francs** - Sliver color - Maize - Coat of arm
 	**A coin of 100 francs** - Silver and copper colors. - Coat of arm.

Rwandan note	Features
 	**A 500 note** - Coat of arm., - Learners who use Laptops - Two cows, - Blue sky color.

A 1000 note

- Coat of arm;
- National museum Centre;,
- A golden monkey
- Blue color;

Get different coins and notes (denominations of the Rwandan currency), group them according to their colors and values.

Say the denominations of the Rwandan currency from the smallest to the largest.

Activity 8.1.2

Discuss the difference between a coin and a note using their features

8.2 Importance of money

Activity 8.2.1

Look at the pictures carefully and say what you have seen

I have learnt that :

We use money to buy different things we need.

Activity 8.2.2

Discuss the following and share your answers with each other

1) When you have 100Frw, what can you buy?
2) When you have 500Frw, what can you buy?
3) When you have 1000 Frw, can you buy a house?

Activity 8.2.3

In your groups, discuss the uses of money and present before other groups.

8.3 Sources of money

Activity 8.3.1

Carefully study the picture and say what you have seen ?

I have learnt that:

- We get money from the work we do and the service we give.
- We decide: To properly use money for well planned a activities, and we shall not misuse money.

Activity 8.3.2

Do you know that your parents use money?, tell your friends where your parents get money from.

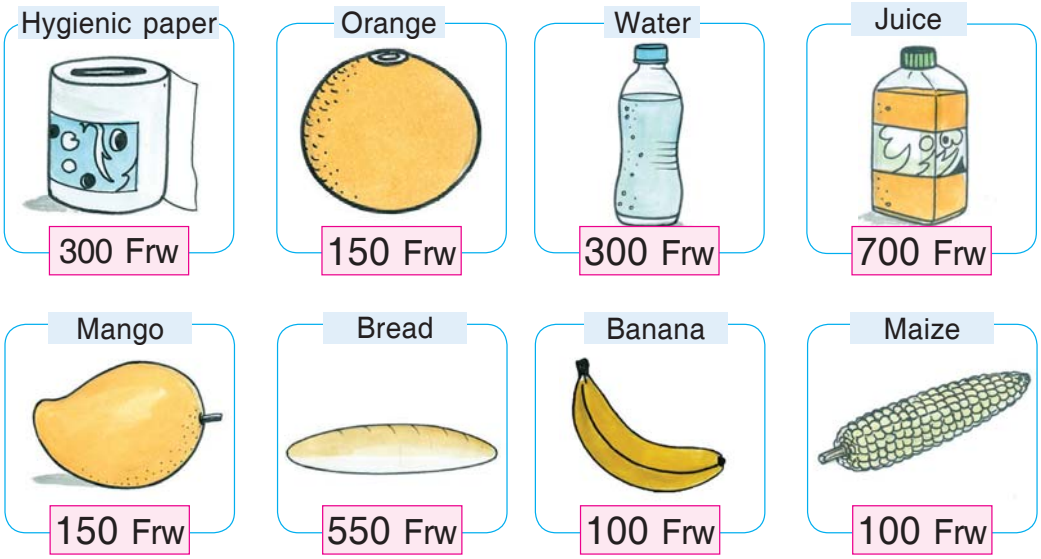
Activity 8.3.3

Read the list of different sources of money. Select good sources and bad sources of money: Agriculture, farming, salary, fraud, cheating, swindling ,breeding, theft, etc.

8.4 Buying and selling

Activity 8.4.1

Study the following pictures carefully and answer the questions that follow.



a) Mutoni wants to buy an orange and a mango. How much money will she pay?

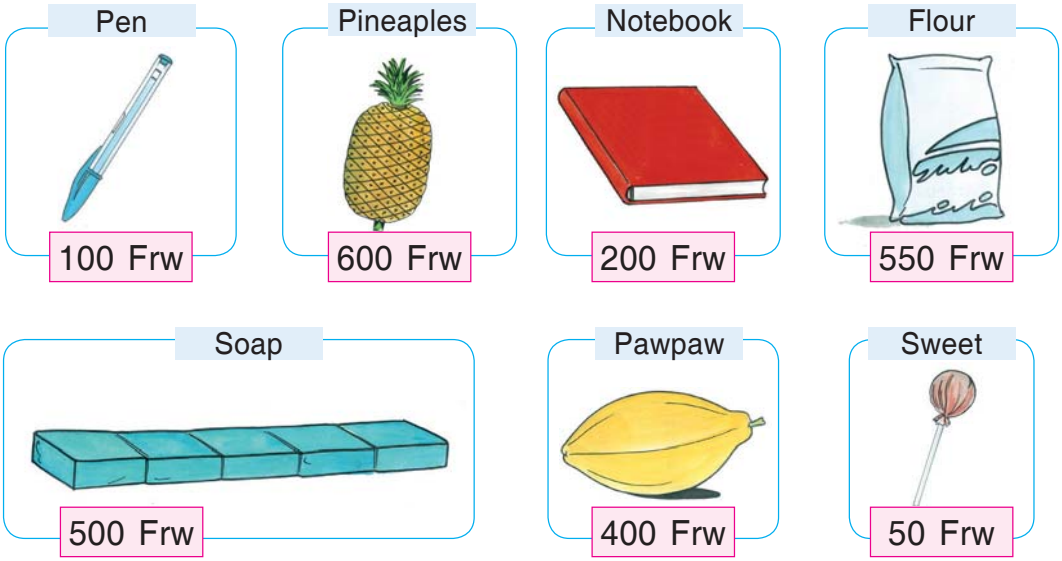
b) Gisa bought a bottle of juice and one cob of maize. How much money did she pay?

c) Kangabe sent Uwase to buy one toilet paper, a banana and a loaf of bread. How much money did she pay altogether?

d) Mahame asked Butera to buy one cob of maize and a loaf of bread. How much money will he Pay altogether?

Activity 8.4.2

Study the following pictures and answer the questions that follow



a) Muhizi has 750 Frw. If he buys a notebook and a bar of soap, what will be his balance?

b) Ingabire has a note of 500Frw. If she buys one pawpaw and a sweet, how much money will she remain with?

8.5 Exchange of Rwandan currency from 1Frw up to 1000Frw

Activity 8.5.1

Find the sum of money equivalent to the given money as shown below.

a) 10 Frw = ___ Frw + ___ Frw

b) 20 Frw = ___ Frw + ___ Frw

c) 20 Frw = ___ Frw + ___ Frw + ___ Frw + ___ Frw

d) 50 Frw = ___ Frw + ___ Frw + ___ Frw

e) 100 Frw = ___ Frw + ___ Frw

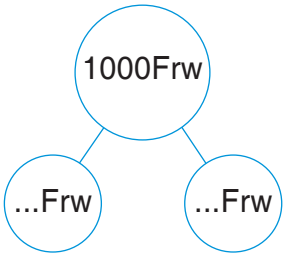
f) 100 Frw = ___ Frw + ___ Frw + ___ Frw + ___ Frw + ___ Frw

g) 500 Frw = ___ Frw + ___ Frw + ___ Frw + ___ Frw + ___ Frw

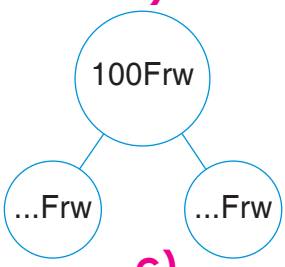
Activity 8.5.2

Fill in the blank spaces correctly.

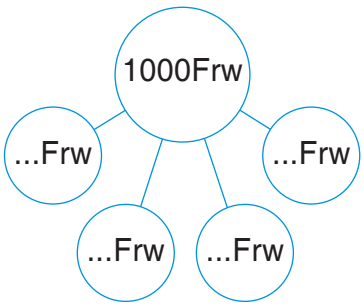
a)



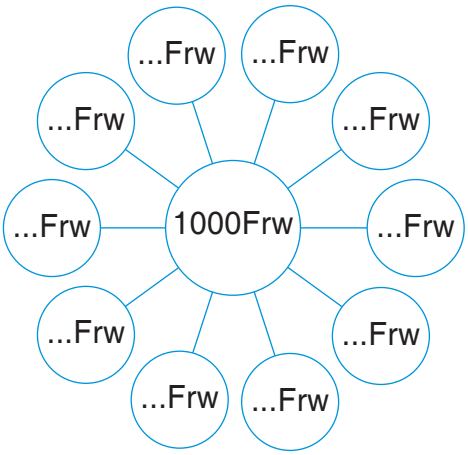
b)



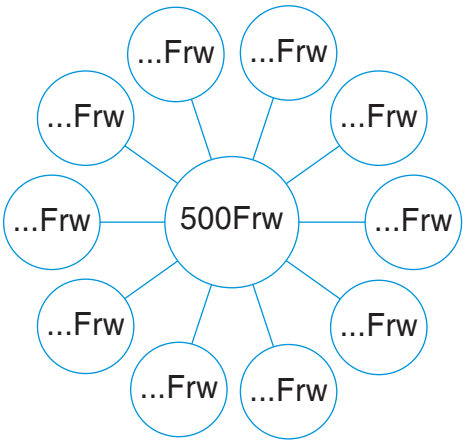
c)



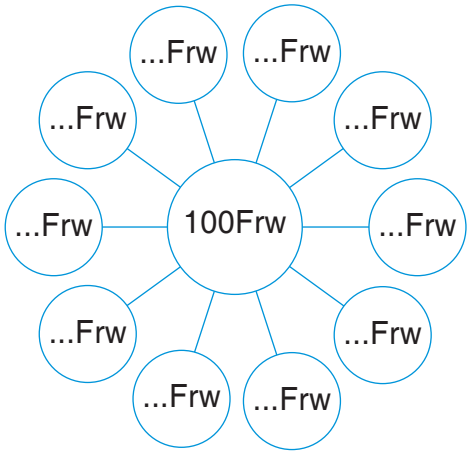
d)



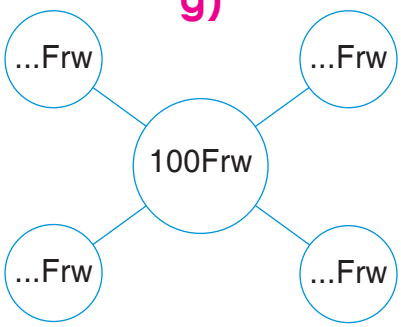
e)



f)



g)



8.6 List down items needed before buying

Activity 8.6.1

Carefully study the picture below,
What do you see?
Is it good to write a list of what you want to buy?

I have learnt that:

It is good to write list of items you want to buy because:
- It helps us avoids counting badly ;
- It helps us to keep time;
- It helps us to buy only what we want;
- It helps us to count our money well.

Activity 8.6.2

Write down things you can buy with **1000 Frw**.

Activity 8.6.3

Read Gahima's shopping list below.

Find the sum of money he will pay for the items.

1. Onions = 200 Frw
2. Soap = 200 Frw
3. Ground nuts = 200 Frw
4. Irish potatoes= 300 Frw

8.7 Good use and management of money

Activity 8.7. 1

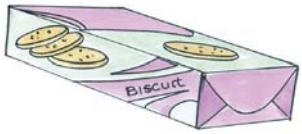
If we have money, choose the most important things we can buy first.

a.

b.

c.

d.

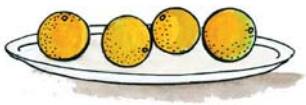


e.

f.

g.

h.



i.

j.

k.

l.

Activity 8.7.2

Carefully study the pictures,

Tell what these people are doing?
Why do you think they are do so?
How can we keep money safely?

I have learnt that:

- We should only buy the most important things we need;
- We should keep money in safe places;
- We must avoid misusing money, writing or cutting notes.

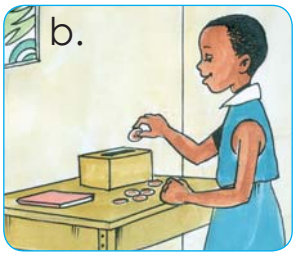
8.8 The habit of saving money

Activity 8.1

Study the pictures carefully and tell what you see?

a.

b.



c.

d.

e.

f.

Is it good to save money in order to use in the future?

I have learnt that:

- It is good to save money. The money we save can help when we have problems.
- We need to save some money.

8.9 Starting a small income generating projects

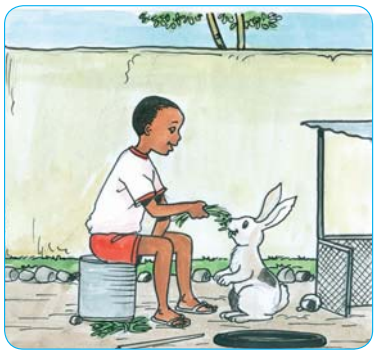
Activity 8.9

Study the following pictures carefully.
What do you see? Can you do the same? .....

a

b

c



d

Do you have an activity which can help you to get money? .....

I have learnt that:

- Children can have small income generating projects which make money;
- We need to have small income generating projects.

8.10 Comparing the amount of money that does not exceed 1000Frw

Activity 8.10.1

Use >, < or = to compare the following amount of money

a) 990 Frw ☐ 750 Frw

b) 900 Frw ☐ 100 Frw

c) 800 Frw ☐ 200 Frw

d) 700 Frw ☐ 900 Frw

e) 600 Frw ☐ 600 Frw

f) 500 Frw ☐ 500 Frw

g) 900 Frw ☐ 980 Frw

h) 850 Frw ☐ 950 Frw

i) 750 Frw ☐ 850 Frw

j) 650 Frw ☐ 750 Frw

k) 550 Frw ☐ 350 Frw

l) 450 Frw ☐ 400 Frw

Activity 8.10.2

Arrange these amount of money from the smallest to the largest

a) 100 Frw, 250 Frw, 50 Frw

b) 600 Frw, 800 Frw, 750 Frw

c) 900 Frw, 700 Frw, 600 Frw

d) 450 Frw, 300 Frw, 150 Frw

e) 500 Frw, 750 Frw, 650 Frw

f) 250 Frw, 950 Frw, 850 Frw

Activity 8.10.3

Arrange these amount of money from the largest to the smallest

a) 250 Frw, 100 Frw, 200 Frw

b) 750 Frw, 620 Frw, 600 Frw

c) 700 Frw, 900 Frw, 800 Frw

d) 150 Frw, 850 Frw, 450 Frw

e) 800 Frw, 350 Frw, 950 Frw

f) 150 Frw, 450 Frw, 500 Frw

g) 750 Frw, 500 Frw, 700 Frw

h) 950 Frw, 380 Frw, 850 Frw

i) 550 Frw, 150 Frw, 650 Frw

j) 750 Frw, 250 Frw, 850 Frw

8.11 Addition and subtraction of Rwandan currency with the sum not exceeding 1000Frw

Activity 8.11

Add or subtract the following amount of money

a) 150 Frw + 500 Frw =

b) 910 Frw – 500 Frw =

c) 800 Frw – 200 Frw =

d) 350 Frw + 450 Frw =

e) 700 Frw – 600 Frw =

f) 400 Frw + 500 Frw =

g) 200 Frw + 800 Frw =

h) 900 Frw – 500 Frw =

i) 250 Frw + 600 Frw =

j) 500 Frw + 450 Frw =

k) 600 Frw – 300 Frw =

l) 950 Frw – 550 Frw =

8.12 Multiplication and division of an amount of money by a whole number

Activity 8.12

Find the answer for the following multiplication or division of the amount of money money by a number

a) 100Frw x 2 =...Frw

b) 80 Frw ÷ 4 = ...Frw

c) 300 Frw ÷ 3 =... Frw

d) 120 Frw × 4 =...Frw

e) 200 Frw × 3 =...Frw

f) 100 Frw × 5 =...Frw

g) 65 Frw × 10 =...Frw

h) 324 Frw ÷ 4 = ...Frw

i) 250 Frw ÷ 5 =...Frw

j) 100 Frw ÷ 6 = ...Frw

k) 100 Frw × 10 = ...Frw

l) 440 Frw × 2 = ...Frw

m) 200 Frw × 4 =...Frw

n) 60 Frw × 6 =... Frw

o) 550 Frw ÷ 5 =...Frw

p) 100 Frw × 6 = ...Frw

8.13 Word problems involving the addition or subtraction of money

Activity 8.13

Let us refer to the example and solve problems

Carefully study the example below:

Example:

Butera has 750Frw. He wants to buy a book which costs 950Frw. How much more money will he need to buy that book?

Solution:

The book costs : 950 Frw
Butera has: 750Frw.
Butera needs: 950Frw - 750Frw = 200 Frw
Butera needs 200Frw to buy that book.

$$\begin{array}{r} 950 \\ -\ 750 \\ \hline 200 \end{array}$$

Solve the following problems:

1. Mahoro bought a notebook at 350frw and pens that cost 200Frw. How much money did Mahoro pay?
2. Shema had a note of 500Frw. He went to buy a bottle of water at 300Frw. What was the balance.
3. Manirakiza was paid 900Frw. He bought juice and remained with 200Frw. How much money did he use to buy juice?
4. Gasore had 900Frw. He went to buy bread and he remained with 250Frw. How much money did he pay on the bread?
5. Uwamahoro bought bananas at 600Frw. She bought also one cabbage at 300Frw. How much money did she pay altogether?

8.14 Word problems involving the multiplication or division of money by a number

Activity 8.14

Let us follow to the example and solve problems

Study these example below:

Example:

One bottle of soda costs 400Frw. Tom is sent to the shop to buy two bottles of soda. How much money will he pay?

Solution:

One bottle of Fanta costs : 400 Frw
Number of bottles : 2
The cost for 2 bottles: 400Frw x 2 =
Tom will pay 800Frw.

$$\begin{array}{r} 400\ \text{Frw} \\ \times\ 2 \\ \hline 800\ \text{Frw} \end{array}$$

Solve the following problems:

1. Peter has 800Frw. If he shares it equally among 4 children. How much money will each child get?
2. Share 900Frw equally among 3 pupils.
3. One notebook costs 200Frw. If I buy 2 notebooks, how much money will I pay?
4. One pizza costs 100Frw. How much money can I use if I buy 10 pizzas for my friends?
5. Ishimwe wants to buy 6 books. If one book costs 100Frw, how much money will he pay?

END UNIT ASSESSMENT 8

1. Answer by Yes or Not

(a) Rwandan currency is made of different coins only.....

(b) Rwandan currency is made of different notes only .....

(c) Rwandan currency is made of different coins and different notes.....

(d) All Rwandan coins and notes have the coat of arm.....

2. Fill in correctly

(a) 1000 Frw = 500 Frw + ☐ Frw

(b) 100 Frw = 50 Frw + 20 Frw + ☐ Frw + 10Frw

(c) 50 Frw = 20 Frw + 10 Frw + ☐ Frw

3. Underline the source of money for your parents

Salary fishing art-craft farming commerce agriculture

4. Use >, < or = to compare amount of money

(a) a note of 1000Frw ☐ 2 notes of 500 Frw

(b) 300 Frw ☐ two coins of 100Frw

5. Arrange the following amount of money from the smallest to the largest

(a) 650Frw, 900Frw, 750Frw, 800Frw

(b) 400Frw, 700Frw, 650Frw, 300Frw

6. Arrange the following amount of money from the largest to the smallest

(a) 450Frw, 550Frw, 350Frw, 250Frw, 650Frw.

(b) F 850, F 250, F 500, F 950, F 400.

7. Write the number of coins or notes in the boxes:

(a) 1000Frw = ☐ notes of 500Frw

(b) 500Frw = ☐ coins of 100Frw

(c) 100Frw = ☐ coins of 50 Frw.

8 Word problems

(a) Muhizi had 900Frw and he went to buy 1Kg of sugar. If the price of the sugar is 850Frw per Kg, how much money left?

(b) Keza bought the bread at 500Frw, eggs of 200Frw and one pizza of 200Frw. How much did she pay?

(c) Share 750Frw equally among 5 cyclists. How much money can each cyclist get?

(d) Masabo goes to school every day. If he pays 400Frw per day. How much money does he pay in 2 days?

(e) When I had 950Frw, I bought rice at 1 750Frw. How much money did I remain with?

Unit 9

Hour, months of the year and days of each month

9.1 Reading and Telling Time shown by a clock face

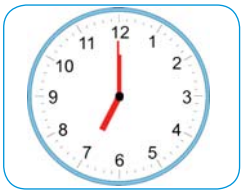
(a) Reading exact time: An hour o'clock

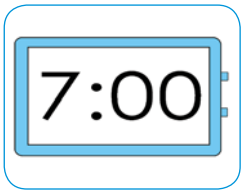
Activity 9.1.1

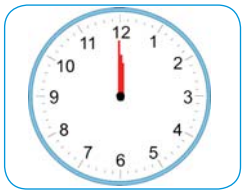
Carefully study the pictures,
What have you seen? .....
What is the use of the items seen below?

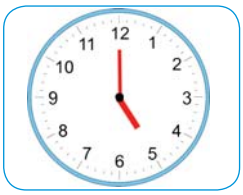
Activity 9.1.2

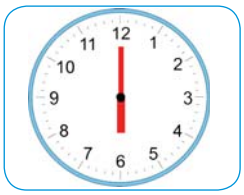
Carefully study the clock faces below and tell the time

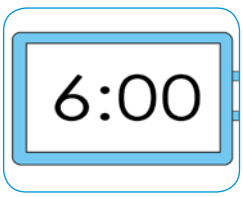












I have leant that:

(a) A clock face has two or three hands

Hour hand: It is the short hand of the clock, It tells time in hours. If it rotates once round the clock face, then the time taken is 12 hours

Minute hand: The long hand of the clock, it tells time in minutes. One full rotation equals 60 minutes

Second hand: The thinnest hand of the clock. it rotates the fastest. Its full rotation equals 60 seconds

- **In the clock face we have:**
  - Numbers from 1 to 12;
  - From one number to another there is 1 hour.

(b) Digital watch with numbers and a colon:

- The first number before the colon indicates hours;
- The number after the colon indicates minutes
- One hour is equivalent to 60minutes
- One day is equivalent to 24hours.

(c) A day

- A whole day has 2 main parts: Day and night
- Every part has 12 hours.
- The first part is divided in two: Before noon (morning) and after noon.

Activity 9.1.3

Answer the following:

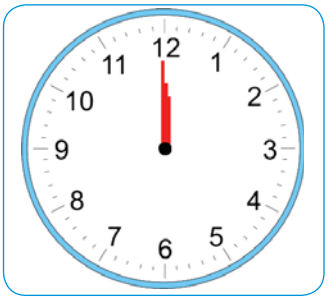
1) The main parts of the day are ……and ……

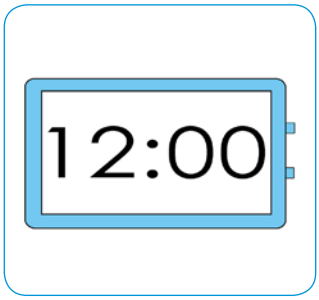
2) The beginning time of the day……and the ending time of the day is…….

3) How many minutes are in one hour ……

Activity 9.1.4

Read and tell the time:





It is _____ It is_____

Reading and telling the time

Writting the time	Reading the time :
12 : 00	It is Twelve o'clock
1 : 00	It is one o'clock.
2 : 00	It is two o'clock
3 : 00	It is thee o'clock
4 : 00	It is four o'clock
5 : 00	It is five o'clock
6 : 00	It is six o'clock
7 : 00	It is seven o'clock
8 : 00	It is eight o'clock
9 : 00	It is nine o'clock
10 : 00	It is ten o'clock
11 : 00	It is eleven o'clock
12 : 00	It is midnight

Activity 9.1.5

Read and tell the time

a

It is _____

b

It is _____

c

It is _____

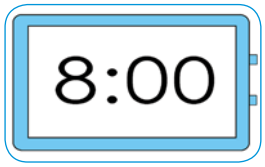
d

It is _____

a.

It is _____

b.

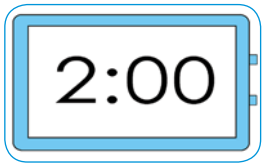


It is _____

c.

It is _____

d.



It is _____

I have learnt that:

On the watch with hands:

When the hour hand reaches a number and the minute hand reaches the number 12, it is a complete hour. Read the number followed by o'clock.

On the watch with numbers and a colon:

When the first number is followed by two zeros after the colon, it is a complete hour.

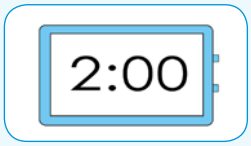
Example: 7: 00 it is 7 o'clock.

Application activity

1. Read and tell the time:

a. 

It is _____

b. 

It is _____

c. 

It is _____

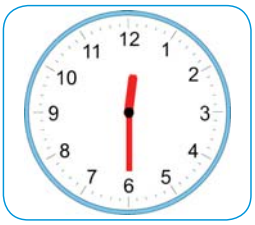
2. Draw a clock faces and show the hands:

a) Twelve o'clock
b) Eight o' clock
c) Eleven o'clock
d) Ten o'clock

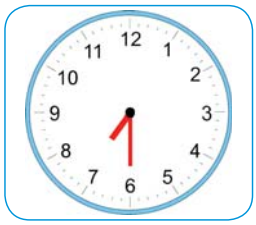
b) Half past an hour

Activity 9.1.6

Read and tell the time

a. 

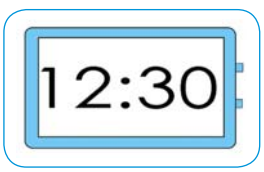
It is_____

b. 

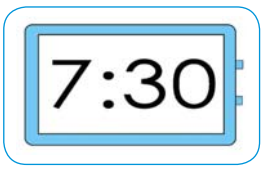
It is_____

c. 

It is_____

a. 

It is_____

b. 

It is_____

c. 

It is_____

I have leant that:

On the watch with hands:

When the hour hand reaches the point half of the interval between two numbers and the minute hand reaches the number 6, it is a half hour. Read "a half past ....(the previous number)".

On the watch with numbers and a colon:

When the first number is followed by 30 after the colon, it is that hour past 30 or a half past that hour.

Example: 9:30; it is "a half past nine".

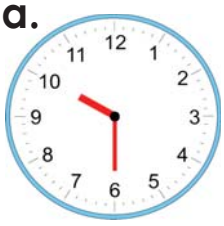
Activity 9.1.7

Draw clock faces and show the hands correctly:

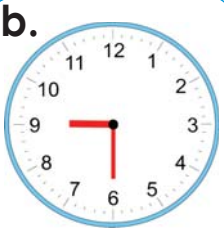
a) 11 : 00
b) 8 : 30
c) 10 : 30
d) 3 : 00
e) 2 : 30
f) 5 : 00

Application activity 9.1.7

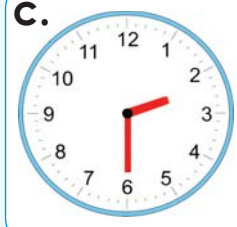
Reading and telling time:

a. 

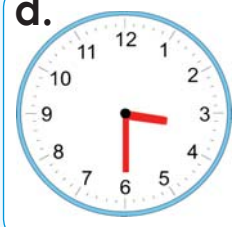
it is _____

b. 

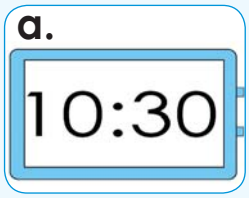
it is _____

c. 

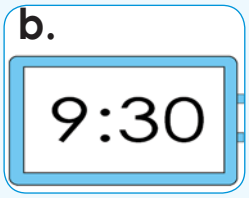
it is _____

d. 

it is _____



it is_____



it is_____

it is_____

it is_____

9.2 The Calendar

Activity 9.2.1

Carefully study the calendar and answer to questions that below:

Questions:

a) How many days make a week?

b) What is the first day of the week?

c) What is the last day of the week?

d) How many working days does a week have?

e) How many weekend days does a week have?

I have learnt that:

7 days make a week.

The week starts at the first day (Sunday), it ends at the seventh day (Saturday).

Let us answer to questions

1. How many days do you come to school in a week?
2. When do you go to the church with your family members?
3. On which day of the week do we do marriage parties?
4. Why do we have working days and weekend days?

Activity 9.2.2

Study the calendar carefully and answer to questions:

January 2017						
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

February 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

March 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

April 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

May 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

June 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

July 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

August 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

September 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1	2	3
4	5	6	7	7	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

October 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

November 2017						
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

December 2017						
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	**26**	27	28	29	30	31

Questions:

(a) How many months are in a year?

(b) Do all months have the same number of days?

(c) List down of months which have 30 days.

(d) Which month the year has fewer days?

(e) How many weeks are in a month?

(f) How many weeks are in a year?

I have learnt that:

One year has 12 months.

Month	Number of days	Month	Number of days
January	31	July	31
February	28/29	August	31
March	31	September	30
April	30	October	31
May	31	November	30
June	30	December	31

- The second month "February" is the month with few days. It has 28 or 29 days.
- One month has 4 weeks.
- One year has 52 weeks;
- A common year has 365 days. When the month of February has 29 days, the year has 366 days.

Activity 9.2.3

Mark a calendar for the current month and hang it in the classroom.

9.3 Schools' activities and timetable

Activity 9.3.1

Carefully study the pictures, what do you see?
Make a list of main activities done at school and the time to carry out those activities.

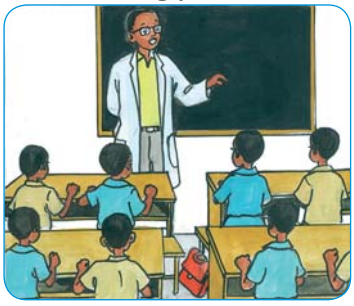
a.

b.

c.

d.

e.



f.

I have learnt that:

An example of a time table showing school activities.

Activities	Time
Arrive at school	7 : 00
School assemble	7 : 10
Entering the class	7 : 30
Lessons	From 7 : 30 to 9 : 30
Break	From 9 : 30 to 10 : 00

Entering	10 : 00
Lessons	From 10 : 00 to 12 : 00
Go home	12 : 00

9.4 Preparing a weekly activity plan

Activity 9.4.1

Study the weekly activity plan for Kagabo and prepare your own.

Day	Activity
Monday	Go to school; Wash home utensils.
Tuesday	Go to school; Mopping.
Wednesday	Go to school; Feeding hens.
Thursday	Go to school; Fetch water.
Friday	Go to school; Mopping.
Saturday	Doing homework; Washing clothes.
Sunday	Go to church; Preparing the room.

I have learnt that:

- The weekly plan helps us to meet the deadline.

We decide to:

- To respect the timetable;
- Avoid being late at school;
- Meet the existing timeline for activities.

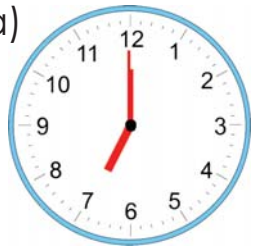
Activity 9.4.2

Discuss the problems you get if you don't follow the time table.

Let us answer to questions

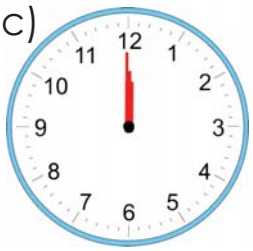
1. What is the time?

a)



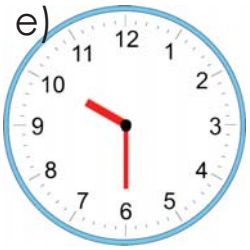
It is _____

c)



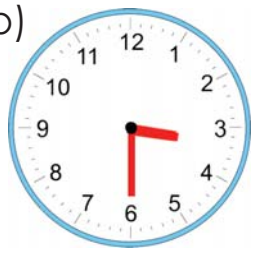
It is _____

e)



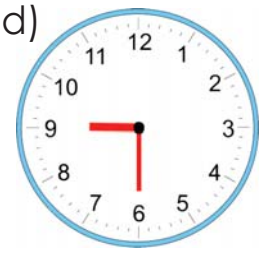
It is _____

b)



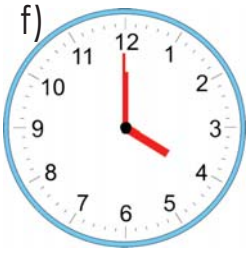
It is _____

d)



It is _____

f)



It is _____

2. Complete the following sentence correctly

a) One hour has ☐ Minutes.

b) One day has ☐ hours.

c) One week has ☐ days.

d) One year has ☐ months.

3. Write down a list of months with:

a) 31days

b) 30 days.

END UNIT ASSESSMENT 9

1. Complete

(a) One year has ____ months.

(b) The long hand of the clock face shows ____

(c) The short hand of the clock face shows ____

(d) One year has ____ hours.

(e) One hour has ____ minutes.

(f) A day has two main parts: the first is ____, the second is ____ .

(g) Each part of the day has ____ hours.

(h) One week has ____ days.

2. Draw

(a) A clock face with hands showing “ten o’clock”.

(b) A clock face with hands showing “one o’clock”.

3. Complete the table below

Months	Days	Months	Days
January	31	July	_____
_____	28/29	_____	31
March	_____	September	_____
_____	30	_____	31
May	_____	November	_____
_____	30	_____	31

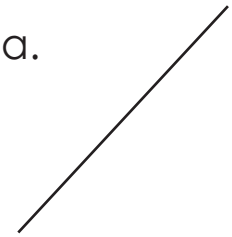
Unit
10

Types of lines and angles

10.0 Preliminary activities

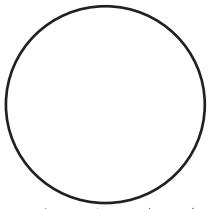
Activity 10.0.1

Names of the following lines

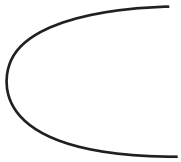
a. 

b.

c.

d. 

e. 

f. 

g. 

Activity 10.0.3

Name this shape:

a. 

b. 

Activity 10.0.1

Give the name of this angle

a. 

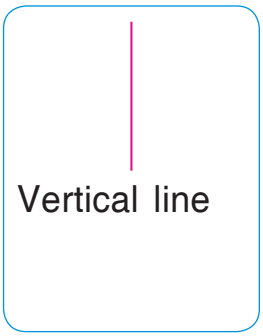
b. 

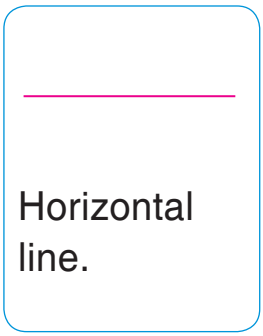
10.1 Straight lines

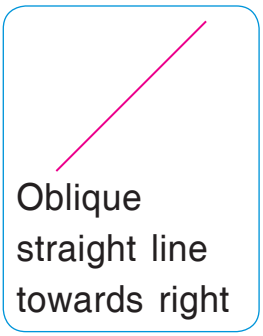
(a) Straight and non closed lines

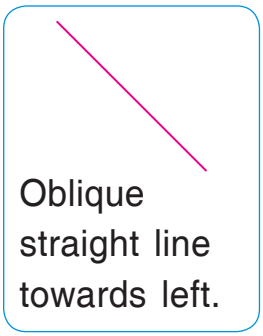
Activity 10.0.1

Study the following lines and write their characteristics


Vertical line


Horizontal line.


Oblique straight line towards right


Oblique straight line towards left.

Activity 10.1.2

Use a ruler to draw:

(a) Oblique straight line
(b) Horizontal line.
(c) Two vertical lines.

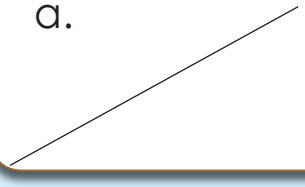
I have learnt that:

There are 4 types of lines:

- The horizontal straight line
- The vertical straight line
- Oblique straight line towards right
- Oblique straight line towards left.

Activity 10.1.3

Mention the name of the following line

a. 

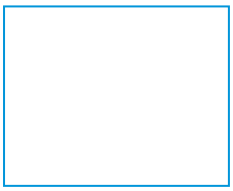
b.

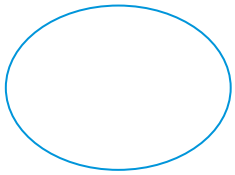
c.

(b) Closed lines

Activity 10.1.4

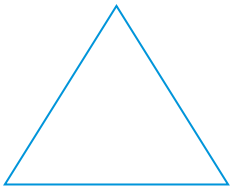
Study these lines and say their characteristics

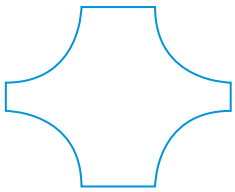
a. 

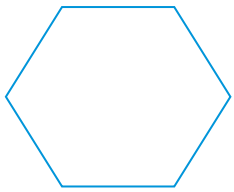
b. 

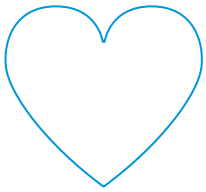
c. 

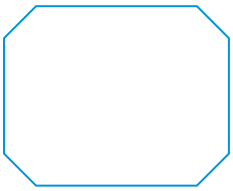
d. 

e. 

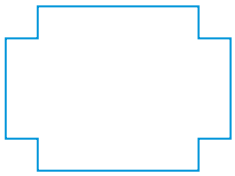
f. 

g. 

h. 

i. 

j. 

k. 

l. 

Activity 10.1.5

Use a ruler to draw the following:

a) a zigzag closed line

b) a closed line

I have learnt that:

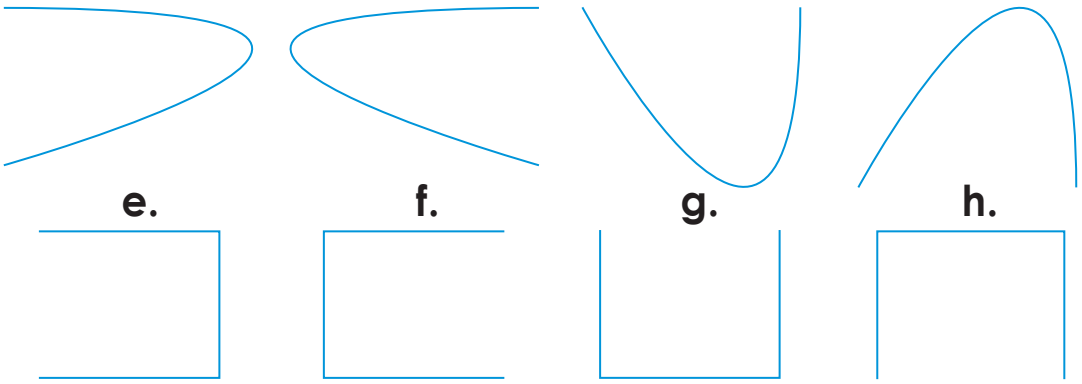
A closed line is a line which is not open.

(c) Non straight open lines

Activity 10.1.6

Study these lines and describe each of them

a. b. c. d.



e. f. g. h.

Activity 10.1.7

Draw:

a) Left open line
b) Top open line

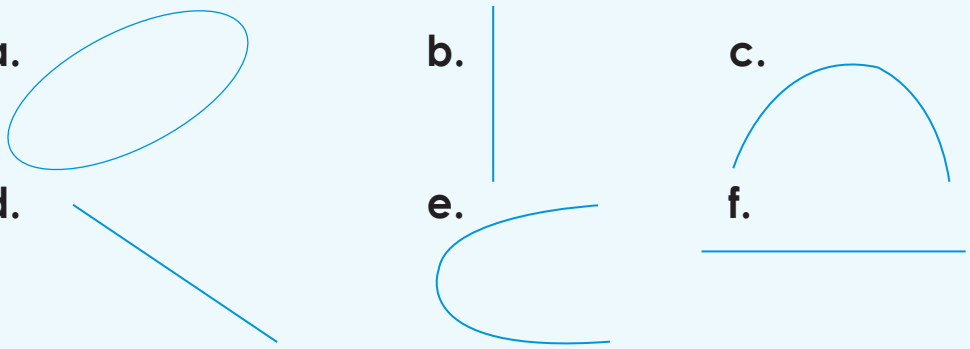
I have learnt:

An open line is a non closed line

Application activity 10.1

Give the name of the following line

a. b. c.



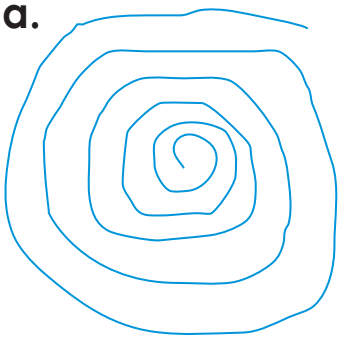
d. e. f.

(d) Curved lines

Activity 10.1.8

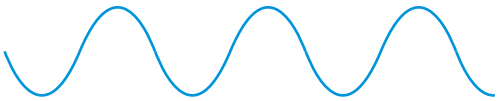
Study these lines and say the characteristics of each of them

a.



b.

c.



d.

e.

f

Activity 10.1.9

Draw the following:

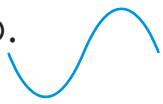
a) A zigzag line
b) A curved down open line

Activity 10.1.10

Write the name of the following lines

a.

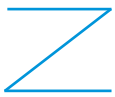
b.



c.

d.

e.



I have learnt that:

- **Curved lines** are non straight lines.
- **Zigzag lines** are lines made by line segments of different directions.

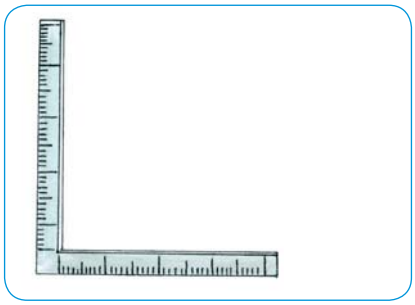
10.2 Types of angles

(a) Right angle

Activity 10.2 1

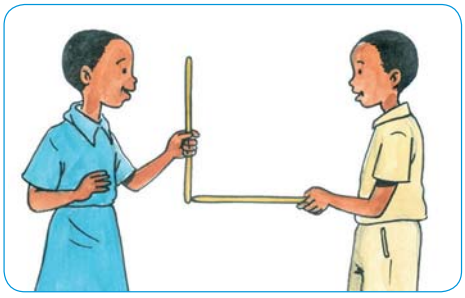
Study picture carefully and tell what you see

a

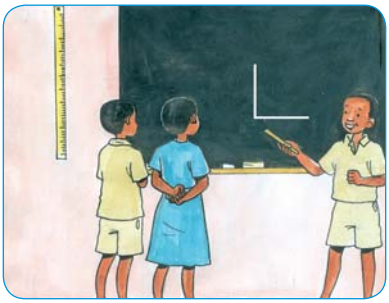


b

c



d

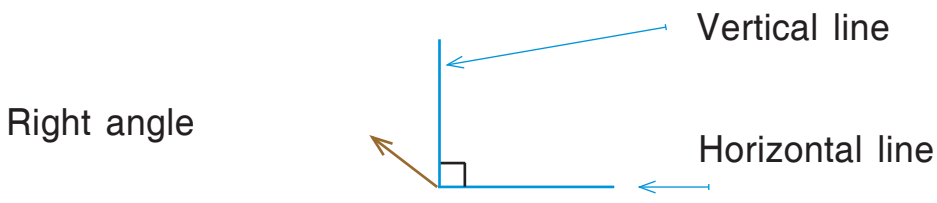


Activity 10.2.2

Draw a right angle.

I have learnt that:

A right angle is an angle formed by two intersecting straight lines: the horizontal and the vertical lines



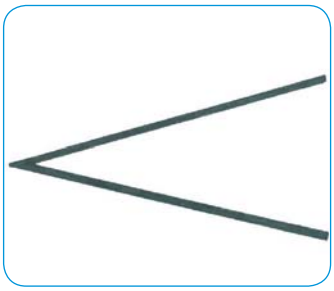
Activity 10.2.3

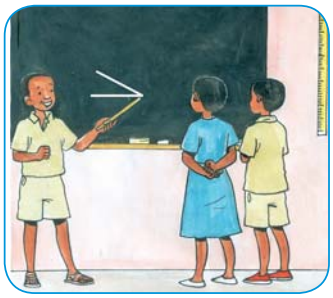
Study objects found in your classroom and mention the objects with a right angle?

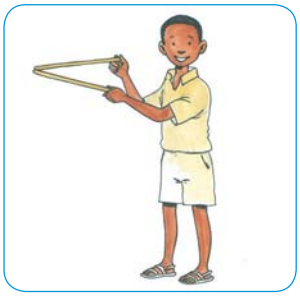
(b) Acute angle

Activity 10.2.4

Study these pictures, Are they less or greater than a right angle?

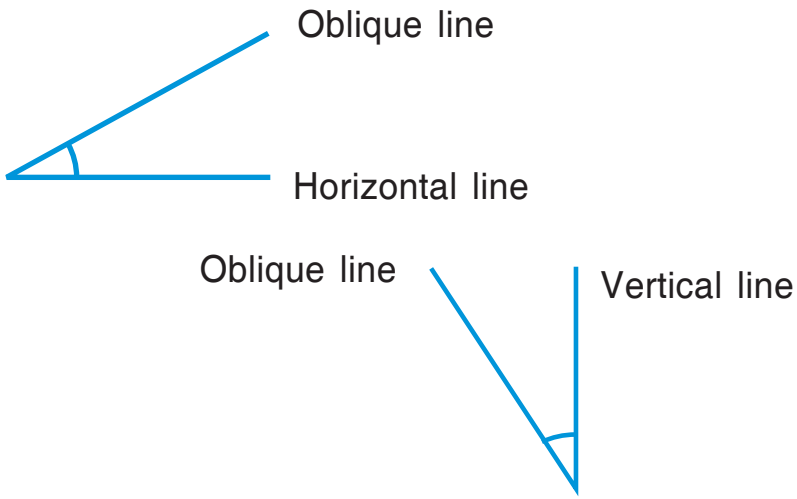
a 

b 

c 

I have learnt that:

An acute angle is an angle made by two intersecting straight lines; one of them is oblique and this angle is less than the right angle.



Activity 10.2.5

Use small sticks or rulers to make an acute angle.

(c) Obtuse angle

Activity 10. 2.6

Study the pictures below carefully and say if the angles is less or greater than right angle.

a.

b.

c.

Activity 10. 2.7

Draw an obtuse angle made by:

a) Two oblique lines
b) Horizontal lines and an oblique line.

I have learnt that:

An obtuse angle is greater than a right angle, it is made of:

- Two oblique lines or
- A vertical line and an oblique line
- A horizontal line and an oblique line

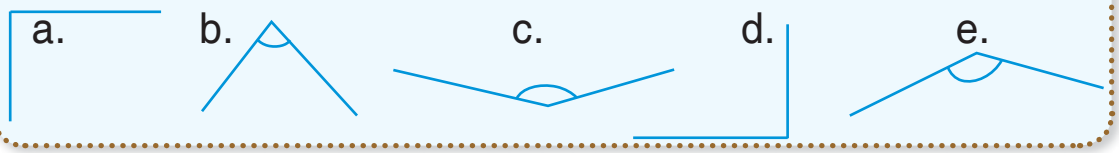
Activity 10. 2.8

Use sticks to form obtuse angles.

Application activities 10.2

Write the name of each of the following angles:

a. b. c. d. e.

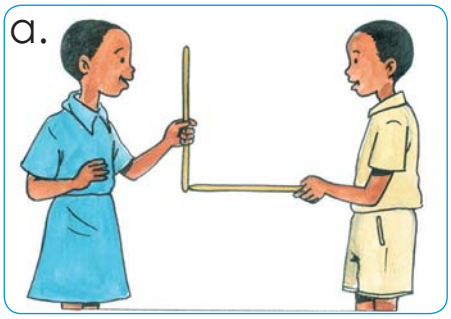


(d) Comparing right angle, obtuse angle and the acute angle

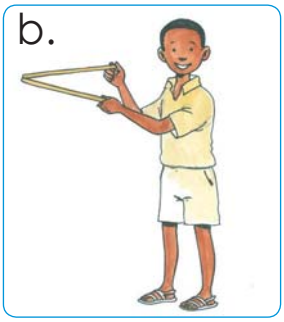
Activity 10.2.9

Study the following angles and compare them using "> < or = "

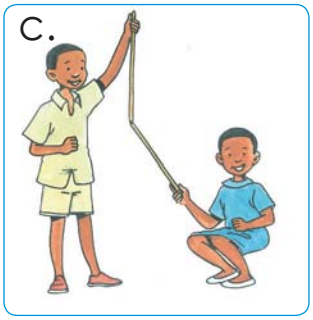
a.



b.



c.

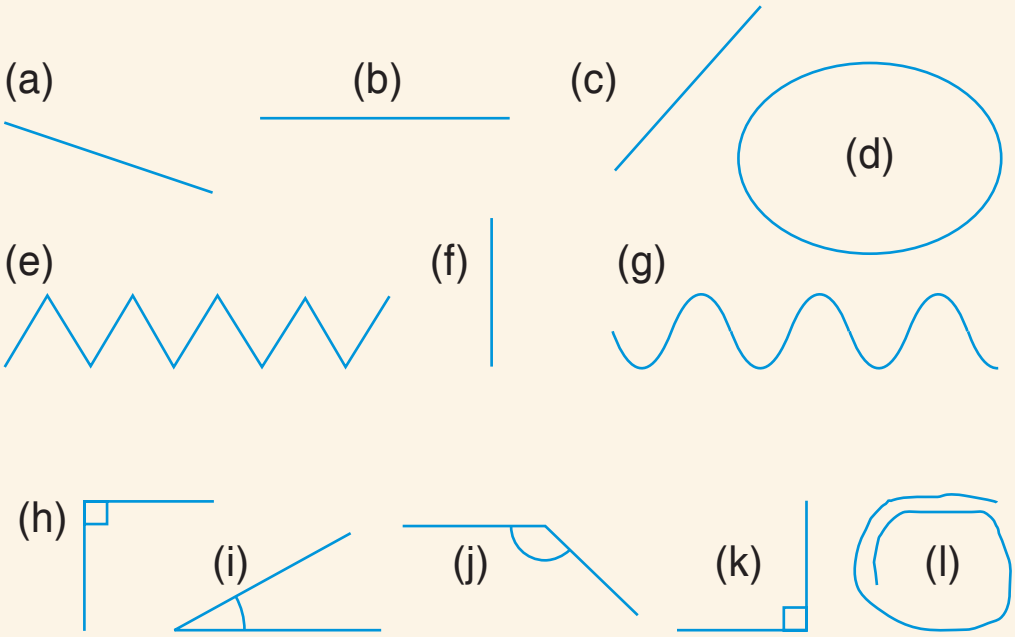


I have learnt that:

- A right angle is greater than an acute angle
- An obtuse angle is greater than a right angle
- An obtuse angle is greater than an acute angle
- An acute angle is less that a right angle
- An acute angle is less than an obtuse angle.

END UNIT ASSESSMENT 10

1. Tell and write the name of the following lines and angles



2. Answer by Yes or No

(a) An obtuse angle is greater than a right angle

(b) An obtuse angle is less than an acute angle

(c) A right angle is greater than an acute angle

3. Draw

(a) A right angle

(b) A closed line

(c) An oblique straight towards the right

(d) An obtuse angle

(e) A vertical straight line

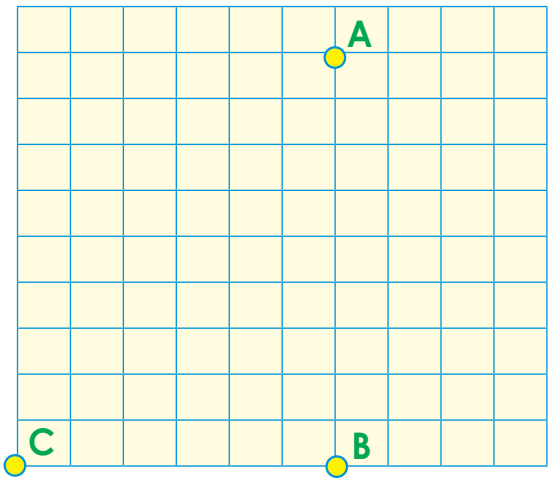
(f) An acute angle

g) A horizontal straight line

Unit 11 Grid

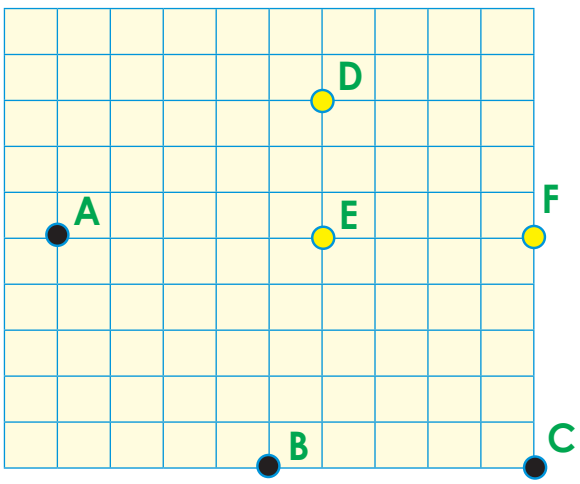
11.0 Preliminary activities

1) Study this grid carefully.



a) Join A and B, B and C. What is the name of the angle obtained?
b) Join A and C, C and B . What is the name of the angle obtained?

2) Study this grid carefully.



a) Join A and B, B and C. What is the name of the angle obtained?

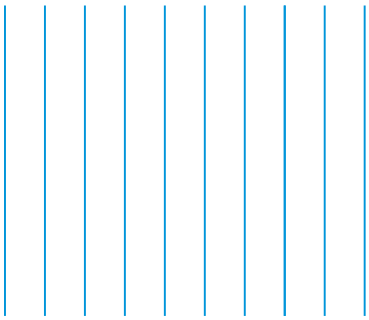
b) Join D and E, E and F. Give the name of the angle obtained.

11.1 Characteristics of a grid

Activity 11.1

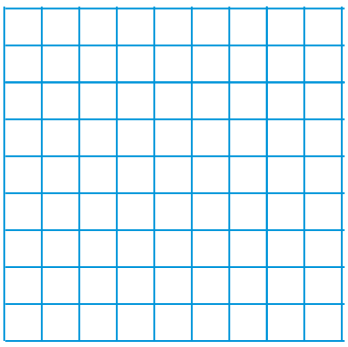
Carefully study the pictures, what do you see? How do you see these lines?

Vertical lines



Horizontal lines

Grids



I have learnt that:

A grid is formed by vertical and horizontal lines.
Vertical lines are called **posts** and horizontal lines are called crossing bars.

11.2 Construction of a grid

Activity 11.2

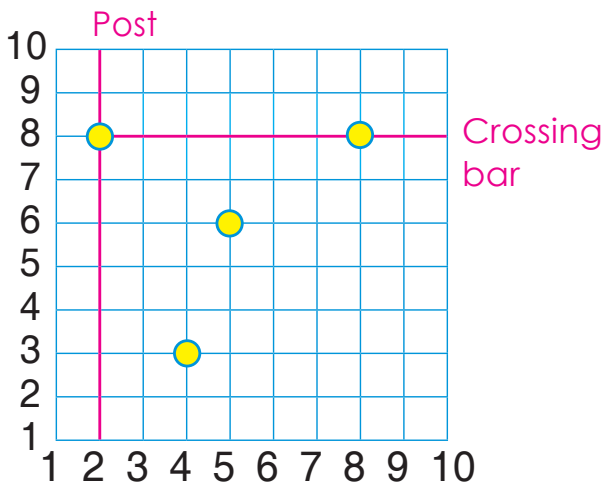
Construct a grid of 6 posts (columns) and 6 crossing bars (rows).

11.3 Putting a point on a grid

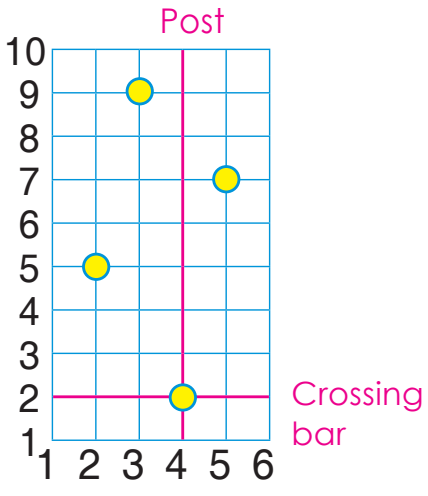
Activity 11.3

Study how to locate a point on a grid. And Share with your friends how you did it

A.



B.



Activity 11.4

Put a point on a grid:

a) The point A is the intersecting point of the crossing bar number 2 and the post number 4 .

b) The point B is the intersecting point of the post number 5 and the crossing bar number 3.

11.4 Location of a point on a grid

Activity 11.5

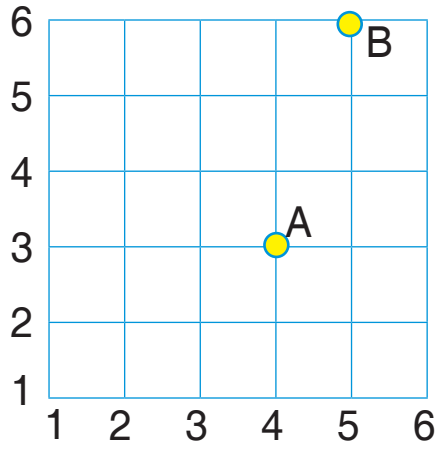
Do the following activity:

- Count and number all posts from the first by using numbers: 1, 2, 3, 4, 5, 6.
- Count and number all crossing bars from the first by using numbers: 1, 2, 3, 4, 5, 6.

Then;

- Show a point A at the intersection of post number 4 and crossing bar number 3.
- Show a point B at the intersection of post number 5 and crossing bar number 6.

The answer is on this grid.



I have learnt that:

When locating a point on a grid, we start by the number of posts and then the number of crossing bars.

Example:

The point A is located at the intersection of post number 4 and the crossing bar number 3.

Activity 11.6

Do the following activity:

1. Draw a grid with 5 posts and 5 crossing bars.
2. Put a point on:
   a) The post number 3 and the crossing bar number 4
   b) Post number 4 and the crossing bar number 5
   c) Post number 2 and crossing bar number 3
3. Draw a grid with 7 posts and 7 crossing bars.
4. Draw a grid with 8 posts and 8 crossing bars. Show the point A located at the post number 5 and the crossing bar number 4.

   Put the point B at the post number 7 and the crossing bar number 6.

END UNIT ASSESSMENT 11

1. a. Construct a grid with 10 posts and 10 crossing bars.

b. Put the points on the grid at:

(a) Post number 3 and the crossing bar number 7.

(b) Post number 10 and the crossing bar number 8

(c) The crossing bar number 5 and the post number 9.

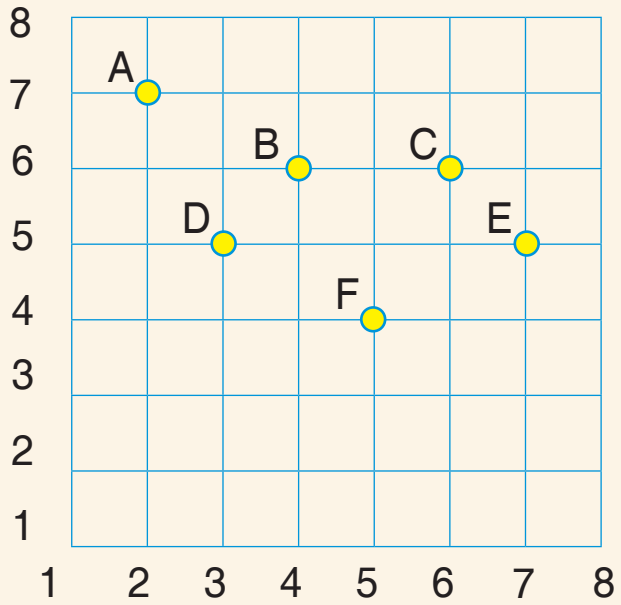
(d) Crossing bar number 7 and the post number 8

(e) Crossing bar number 4 and the post number 6

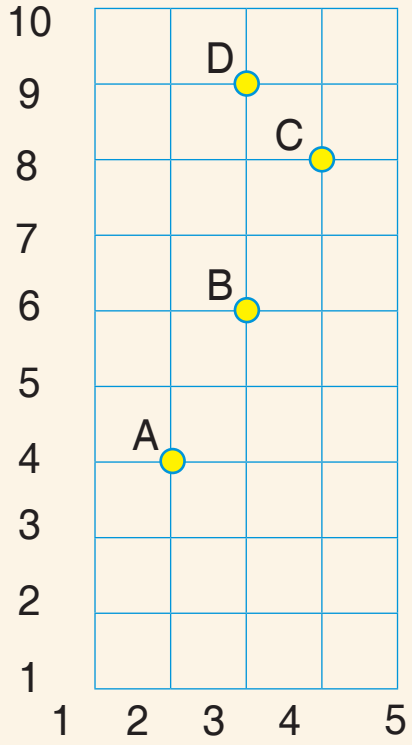
(f) Crossing bar number 6 and the post number 10.

2. Locate the position of each point in the given grids

A.



B.



Unit 12 Square, Rectangle and Triangle

12.1 The Square

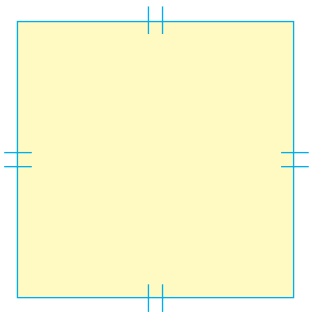
(a) Properties of a square

Activity 12.1.1

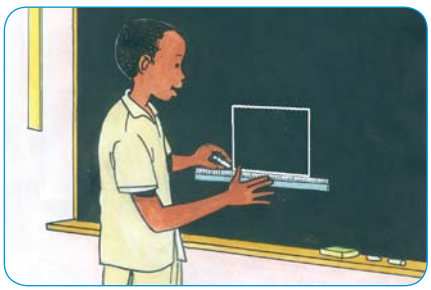
Carefully study the following pictures. Use a ruler to measure the lengths of sides and compare them. What is the length of the sides?

How do we call the angles in the shape seen below?

a.



b.



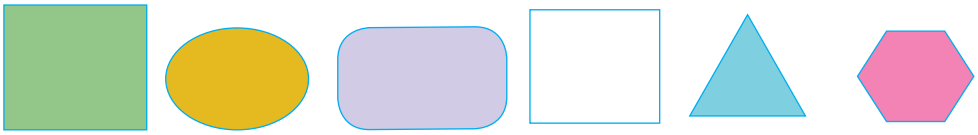
I have learnt that:

The square is a figure with **4 equal sides** and **4 right angles**.

Activity 12.1.2

Study the following pictures and identify the square. Mention why you say it is a square?

1 2 3 4 5 6



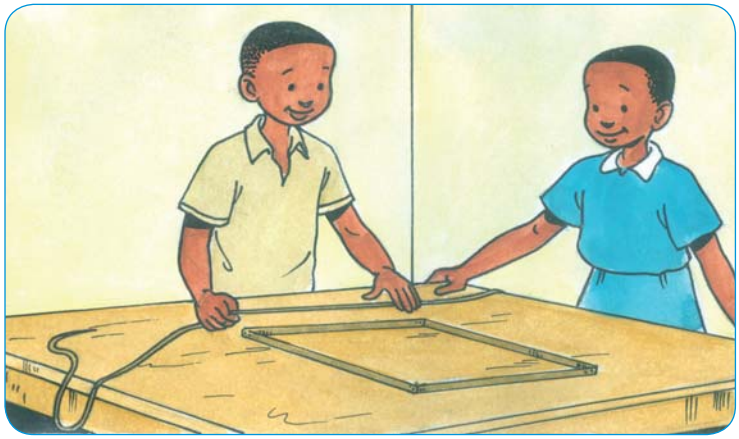
Activity 12.1.3

Take a sheet of paper.
Fold it and make a square of **10cm** of side.
Cut that square and show it to your friends.

(b) Perimeter of a square

Activity 12.1.4

Carefully study the picture below.
What are these children doing?



Activity 12.1.5

Do the following activity, then tell others what you find:

- Draw a square with side of 20cm.
- Put the rope around the square and write the total length of the rope
- Measure the length for each side and then add them and write down the sum of 4 sides.
- Compare the length of the rope and the sum of the lengths for 4 sides. What do you find?

I have learnt that:

The perimeter of a square:

It is the total length for all 4 sides of a square = **Side + Side + Side + Side = Side x 4.**

Example:

Find the perimeter of a square whose side has 23 cm.

Solution:

Given: Side =23 cm
Request: perimeter=?
Perimeter = **Side + Side + Side + Side = Side x 4**
Perimeter = 23 cm + 23 cm + 23 cm + 23cm = 92 cm
Or Perimeter = 23 cm x 4 = 92 cm.

Activity 12.1.6

Refer to the previous example and do the following:

1) Find the perimeter for a square with :

   (a) 40cm of side (b) 60m of side (c) 50 dm of side.

2) Find the perimeter of a field which looks like a square with 30m of side.

3) Calculate the perimeter of a window which has the form of a square, its side is 72 cm.

12.2 The Rectangle

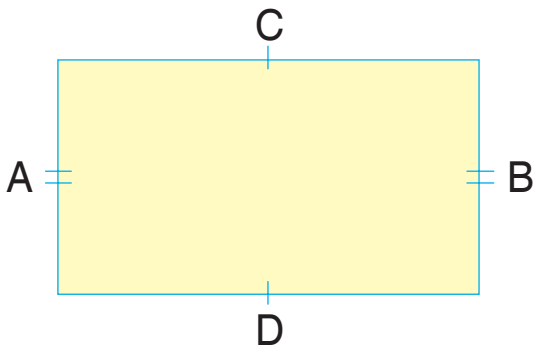
(a) Properties of a rectangle

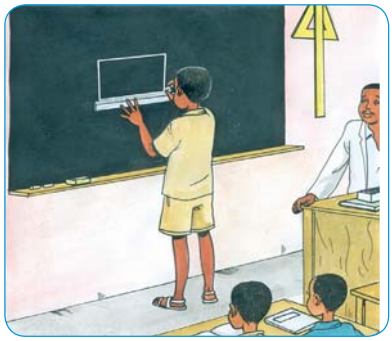
Activity 12.2.1

Study the following pictures carefully. Use a ruler to measure the lengths of sides and compare them.

How sides does a rectangle have?

What are angles in a rectangle?





I have learnt that:

A rectangle is a figure with 4 sides;

Two parallel sides are equal.;

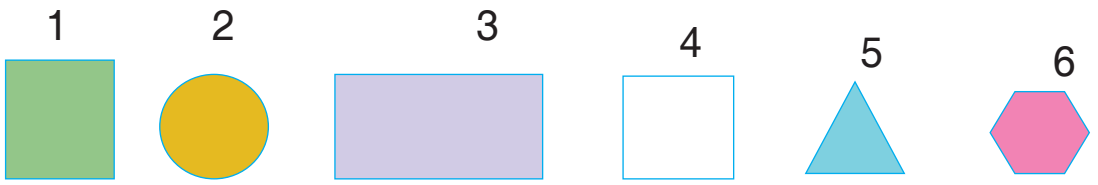
It has **4 right angles**;

The two short sides are called **widths (W)** , the longer sides are called **lengths (L).**

Activity 12.1.6

Carefully study the following shapes below and show a rectangle,

Mention why you say it is a rectangle?



Activity 12.2.3

Take a sheet of paper.
Fold it and make a rectangle. Cut that rectangle and show it to your friends.

(b) Perimeter of a rectangle

Activity 12.2.4

Carefully study the picture. What are the children doing?

Activity 12.2.5

Do this activity and then share you findings with you friends:

- Draw a rectangle with 30cm of length and 25cm of width.
- Surround the rectangle with a rope and measure the total length of the rope.

How long is the rope?

- Measure the length for each side and then add them and write down the total length of 4 sides.
- Compare the length of the rope and the sum of the lengths of 4 sides. What do you find?

I have learnt that:

The perimeter of a rectangle:

It is the total length for all 4 sides of a rectangle = **length + width+ length+ width=**

Perimeter = (L+W) + L+W)

Then **the Perimeter of a rectangle = (L+W) x 2**

Perimeter is the sum of two times the length and two times the width.

Activity 12.2.6

Follow this example carefully and answer the questions that follow:

Example:

Find the perimeter of a rectangle with the length of 8cm and the width of 4cm.

Solution:

Given: Length=L=8 cm; Width= W= 4cm

Request: perimeter=?

Perimeter = (L+W) x 2

Perimeter = (8cm + 4cm) x2 = 12cm x 2= 24cm

The perimeter has **24cm**.

1) Follow the example above and find the perimeter of a rectangle with:

   a) Length =12cm, Width = 7cm.

   b) Length = 40cm, Width = 25cm

   c) Length = 30cm, Width = 12cm.

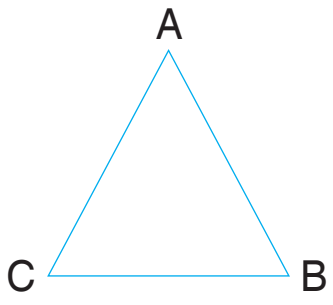
2) Find the perimeter of a rectangular garden with 60m of length and 30m of width.

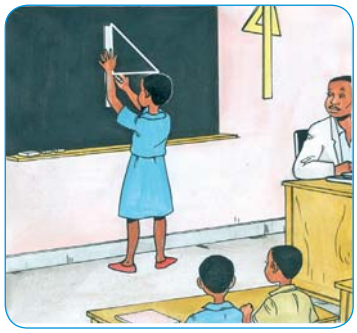
12.3 The Triangle

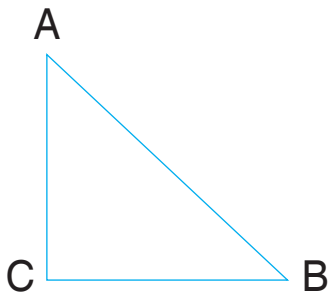
(a) Properties of a triangle

Activity 12.3.1

Carefully study the following pictures.
How many sides and angles does a triangle have?





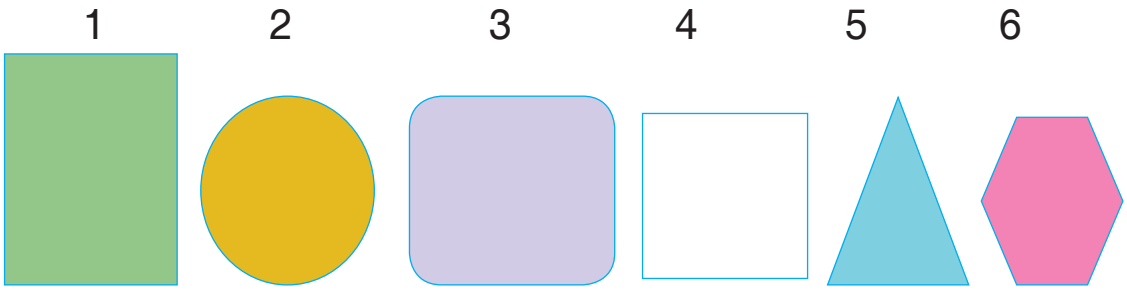


I have learnt that:

A triangle is a shape with 3 sides and 3 angles.

Activity 12.3.2

Study the following pictures carefully and Show a triangle,
Why do you say it is a triangle?



Activity 12.3.3

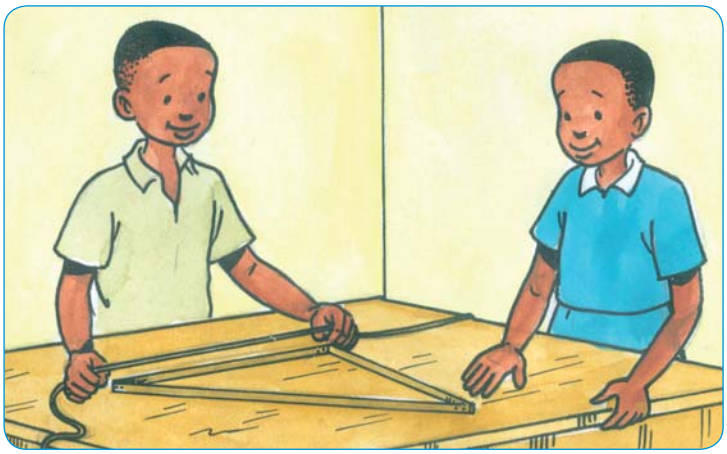
Take a sheet of paper.
Fold it and make a triangle. Cut that triangle and show it to your friend.

(b) Perimeter of a triangle

Activity 12.3.4

Do the following activity and then tell your friends what you find:

- Measure the length for each side of a triangle and then add them and write down the total length of 3 sides.
- Surround the triangle with a rope and measure the total length. How long is the rope?
- Compare the length of the rope and the sum of the lengths for 3 sides. What do you find?



I have learnt that:

The perimeter of a triangle:

It is the total length for all 3 sides of a triangle =

Side + Side + Side

Perimeter = **(Side + Side + Side)**.

Example:

Find the perimeter of a triangle with sides of the following sides: first side has 30cm; the second side has 25 cm and the third side has 35cm.

Solution:

Given: first side: 30cm; the second side: 25 cm and the third side: 35cm.

Request: perimeter=?

Perimeter = **Side + Side + Side**

Perimeter = 30cm + 25 cm + 35cm = 90 cm

The perimeter has 90 cm.

Activity 12.3.5

Find the perimeter of triangles with sides of the following sides:

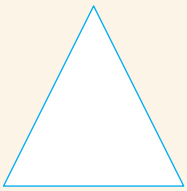
a) 15cm, 15cm and 15cm.

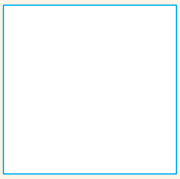
b) 27dm, 60dm and 30dm.

c) 42cm, 24cm and 38cm.

END UNIT ASSESSMENT 12

1. Name the following figures:

(a) 

(b) 

(c) 

2. Answer by YES or NO

(a) A square has 4 equal sides……

(b) The short sides of a rectangle are called length (L)…..

(c) A rectangle has 4 right angles……..

(d) A square has 4 acute angles…….

(e) A rectangle has 3 sides, for which 2 are parallel and equal……..

(f) The long sides of a rectangle are called Width. ……

(g) A triangle has 4 sides and 3 angles……..

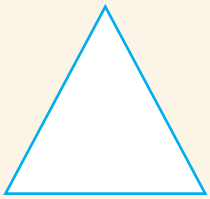
3. Find the perimeter of:

(a) A square with the side of 12cm.

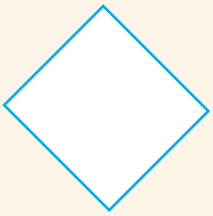
(b) A rectangle with the length of 12cm and the width of 8cm.

(c) A triangle which has: 7cm, 8cm and 9cm of sides.

4. Write 1 on a square, write 2 on a rectangle and write 3 on a triangle.

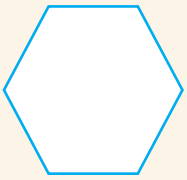
(a) 

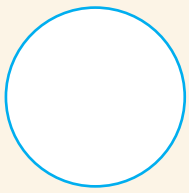
(d) 

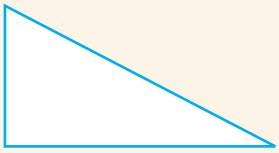
(g) 

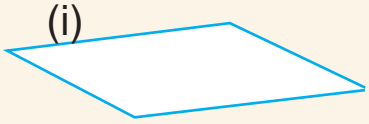
(b) 

(e) 

(h) 

(c) 

(f) 

(i) 

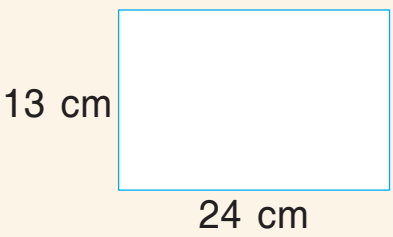
5. Find the perimeter of a flower gardens with the form of:

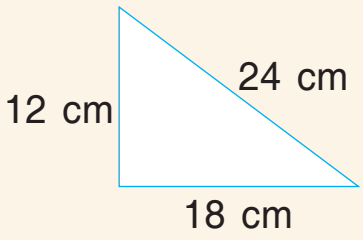
(a) A square of 80m of side.

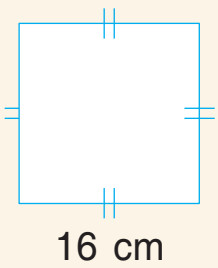
(b) A rectangle with 54m of length and 40m of width.

(c) A triangle with 25m, 27m and 30m of sides.

6. Find the perimeter of the following figures:





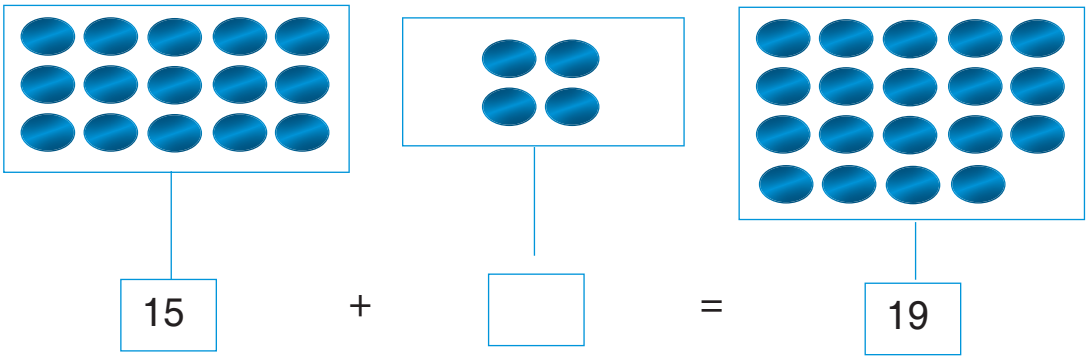


Unit 13 Missing numbers in addition, subtraction, multiplication or division

13.1 Discover the unknown number by quick addition or subtraction

Activity 13.1.1

Study the figures below, count and complete the missing number. Explain how you found it.



Activity 13.1.2

Complete the missing numbers

a) 15 + ☐ = 23

b) 24 + ☐ = 40

c) 45 + ☐ = 79

d) 34 + ☐ = 55

e) 49 + ☐ = 60

f) 71 + ☐ = 99

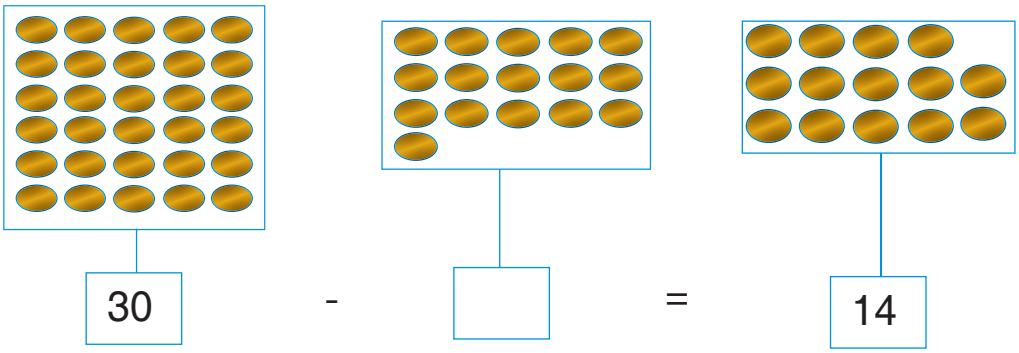
I have learnt that:

To find the missing number (the unknown) in number sentence with addition, you subtract the sum from the given number. **Example:** For 15 + ☐ = 23, we take 23 - 15 = 8

15 + 8 = 23

Activity 13.1.3

Study the figures below, count and complete the missing number.



Activity 13.1.4

Complete the missing numbers

a) 39 - ☐ = 19 c) 62 - ☐ = 38 e) 74 - ☐ = 24

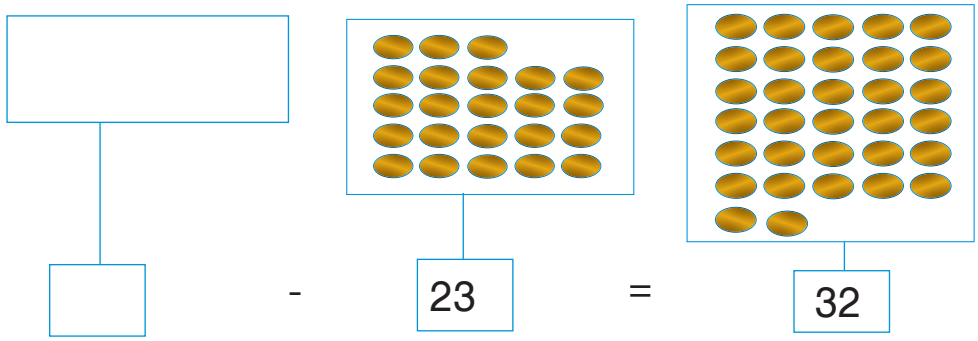
b) 45 - ☐ = 30 d) 39 - ☐ = 11 f) 47 - ☐ = 27

I have learnt that:

To find the missing number in a number sentence of subtraction, For example, f) 47 - ☐ = 27, we take 47-27 = 20. Then, 47 - 20 = 27

Activity 13.1.5

Study the figures below, count and complete the missing number. Explain how you found it,



Activity 13.1.6

Find the missing number

a) ☐ - 39 = 61 c) ☐ - 64 = 27

b) ☐ - 54 = 87 d) ☐ - 72 = 90

I have learnt that:

When the missing number is the first number, find it by adding the difference and the second number.
For example, in (b) ☐ - 54 = 87, we take 87 + 54 = 141.
Then we get 141 - 54 = 87

Activity 13.1.7

Follow the example 1 and example 2 and then find the missing number in next questions

Example 1

$$\begin{array}{r} 726 \\ +\,173 \\ \hline 899 \end{array} \rightarrow 9 - 2 = 7$$

Example 2

$$\begin{array}{r} 488 \\ -\,172 \\ \hline 316 \end{array} \rightarrow 7 + 1 = 8$$

a) 406 + 37☐ = 779

b) 275 + 5☐4 = 779

c) 937 + 8☐6 = 101

d) 9☐9 - 662 = 327

e) 997 − ☐76 = 421

f) 342 + ☐35 = 777

g) ☐82 + 917 = _99

g) ☐24 + 662 = 986

i) 674 - 3☐2 = 372

j) 37☐ + 625 = 997

k) 314 + 49☐ = 809

l) 874 - 65☐ = 221

13.2 Finding the missing number in a number sentence with multiplication or division

Activity 13.2

Find to the examples and find the missing number in next questions

Examples:

a) 3 x 4 = 12 ⟶ (12 ÷ 4 = 3)

b) 5 x 4 = 20 ⟶ (20 ÷ 5 = 4)

c) 27 ÷ 3 = 9 ⟶ (9 x 3 = 27)

d) 15 ÷ 5 = 3 ⟶ (15 ÷3 = 5)

a) ☐ × 3 = 15 d) 4 × ☐ = 20 g) 6 × ☐ = 36

b) 3 × ☐ = 48 e) 4 × ☐ = 28 h) ☐ ÷ 6 = 6

c) ☐ ÷ 3 = 9 f) ☐ ÷ 4 = 8 i) ☐ ÷ 5 =7

I have learnt that:

- When finding the missing number in a number sentence with multiplication sign, take the answer (product) divide by the given number.
- When finding the missing number in a number sentence with division sign, take the answer (quotient) multiply by the given number.

Let me work out

a) ☐ ÷ 2 = 24 d) 4 × ☐ = 88 g) ☐ ÷ 3 = 33

b) 6 × ☐ = 48 e) ☐ x 3 = 99 h) 5 x ☐ = 55

c) ☐ ÷ 5 = 61 f) 69 ÷ ☐ = 23 i) ☐ ÷ 6 = 31

13.3. Number pattern

(a) Finding the common difference in a number pattern

Activity 13.3.1

Follow the example and find the common difference used in the next number patterns

Example:

a) 45, 60, 75, 90

Common difference ⟶ 60 – 45 = 15, 75 – 60= 15, 90 – 75 = 15.

The Common difference is 15

b) 165, 155, 145, 135

Common difference ⟶ 165 – 155 = 10, 155 – 145 = 10, 145 – 135 = 10

The Common difference is 10

a) 18, 20, 22
b) 75, 55, 35
c) 12, 20, 28
d) 100, 70, 40
e) 999, 892, 785
f) 400, 250, 100
g) 105, 100, 95
h) 23, 30, 37
i) 15, 30, 45
j) 900, 700, 500
k) 600, 450, 300
l) 150, 200, 250

I have learnt that:

1. When numbers are arranged from the smallest to the biggest: To find the common difference, you find the difference of two consecutive numbers: the bigger minus the smaller. This is the **additive common difference**.
2. When numbers are arranged from the biggest to the smallest: To find the common difference, you find the difference of two consecutive numbers: the bigger minus the smaller. This is the **subtractive common difference**.

(b) Finding the missing number in the number pattern

Activity 13.3.2

Complete the missing number in the following number patterns

a) 25, 35, 45, ☐, 65

b) 18, 25, 32, ☐, 46

c) 25, 50, 75, ☐, 125

d) 10, 20, 30, ☐, 50

e) 11, 22, 33, ☐, 55

f) 60, 75, 90, ☐, ☐

g) 100, 85,70, ☐, ☐

h) 148, 140, 132, ☐, ☐

i) 19, 30, 41, ☐, ☐

j) 55, 70, 85, ☐, ☐

k) 100, 150, 200, ☐, ☐

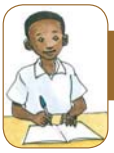
l) 32, 40, 48, ☐, ☐

m) 32, 64, 96 , ☐, ☐

n) 250, 200, 150, ☐, ☐

o) 700, 600, 500, ☐, 300

p) 115, 105, 95, ☐, ☐



Let me work out

1. Find the missing number in the following number patterns:
   a) 200, 150, 100, ☐, ☐
   b) 800, 600, 400, ☐, ☐
   c) 150, 300, 450, ☐, ☐
   d) 225, 200, 175, ☐, ☐
2. Find the common difference used in the following number patterns:
   a) 100, 85, 70, 55. The common difference is...
   b) 22, 40, 58, 76. The common difference is ...
   c) 93, 80, 67, 54. The common difference is...

END UNIT ASSESSMENT 13

1. Complete the missing number

(a) $\square + 950 = 999$

(b) $653 + \square = 785$

(c) $\square - 357 = 421$

(d) $935 - \square = 624$

(e) $\square \times 6 = 48$

(f) $5 \times \square = 25$

2. Find the common difference of the following number patterns:

(a) 25, 30, 35, 40, 45

(b) 100,150, 200, 250, 300

(c) 95, 87, 79, 71, 63.

(d) 125, 100, 75, 50, 25

3. Find and complete the missing number

(a)
$$\begin{array}{r} 4\square 6 \\ +\ 492 \\ \hline 898 \end{array}$$

(b)
$$\begin{array}{r} 98\square \\ -\ 566 \\ \hline 423 \end{array}$$

(c)
$$\begin{array}{r} 6\ \square \\ \times\ \ 6 \\ \hline 366 \end{array}$$

4. Find the missing number

(a) 48, 54, 60, $\square$, $\square$, 78

(b) 81, 72, 63, $\square$, 45, $\square$

(c) 95, 105, 115, $\square$, $\square$, $\square$

(d) 900, 800, 700, $\square$, 500, $\square$

(e) 375, 400, 425, $\square$, 475, $\square$

(f) 675, 690, 705, $\square$, $\square$, 750

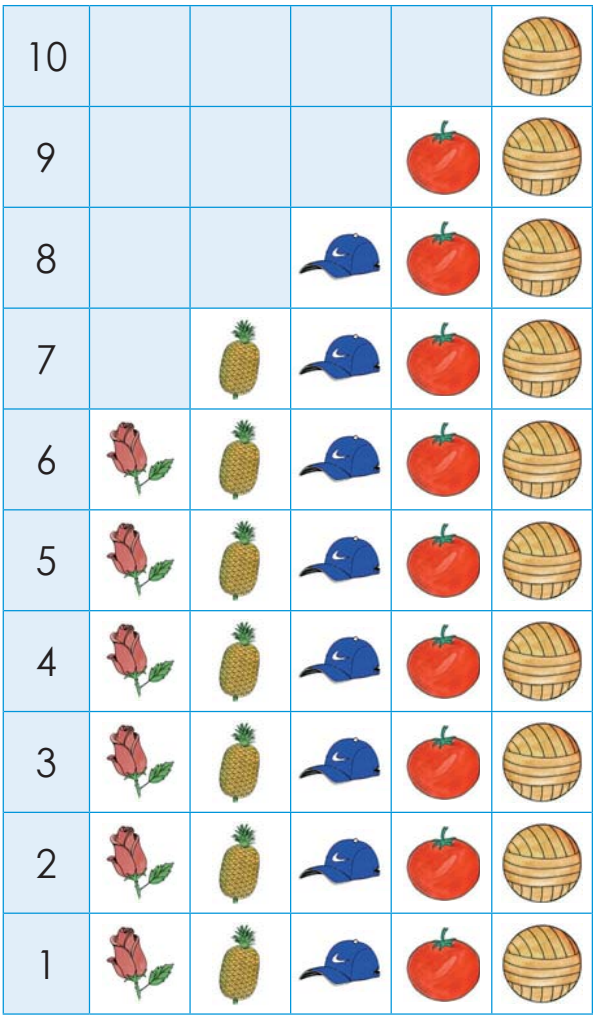
(g) 840, 820, 800, $\square$, 760, $\square$

Unit 14 Pictographs

14.1 Making groups of objects and showing them on a pictograph

Activity 14.1

Carefully study the pictures below.
What do you see on the graph? Give the number of each type of object.
How do you get this number? Do you know a column?



14.2 Describing and interpreting various pictographs showing the number of objects.

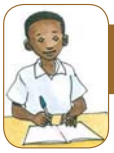
Activity 14.2

Study the pictograph carefully. Match the number symbol to the number of each object.
How do you get this number?

10					
9					
8					
7					
6					
5					
4					
3					
2					
1					

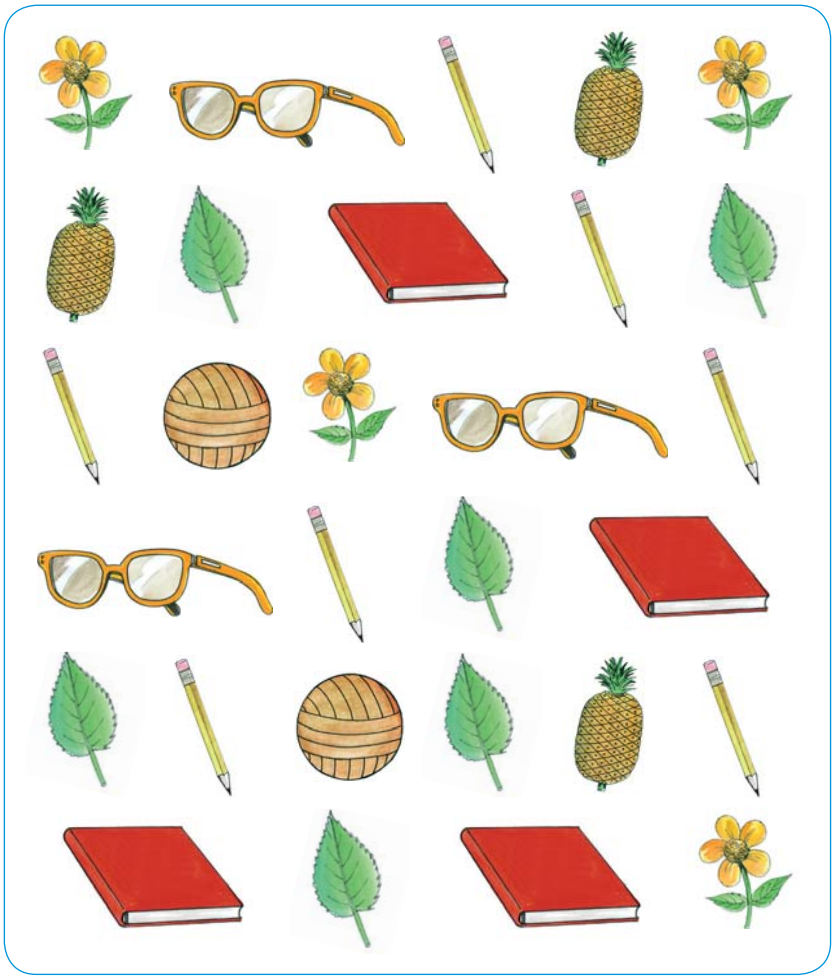
I have learnt that:

- Two leaves Match with the number 2 (on the left).
- Nine books match with number 9.
- Four cars match with the number 4.
- 9 sweets match with the number 9.
- 10 apples match with the number 10.



Let me work out

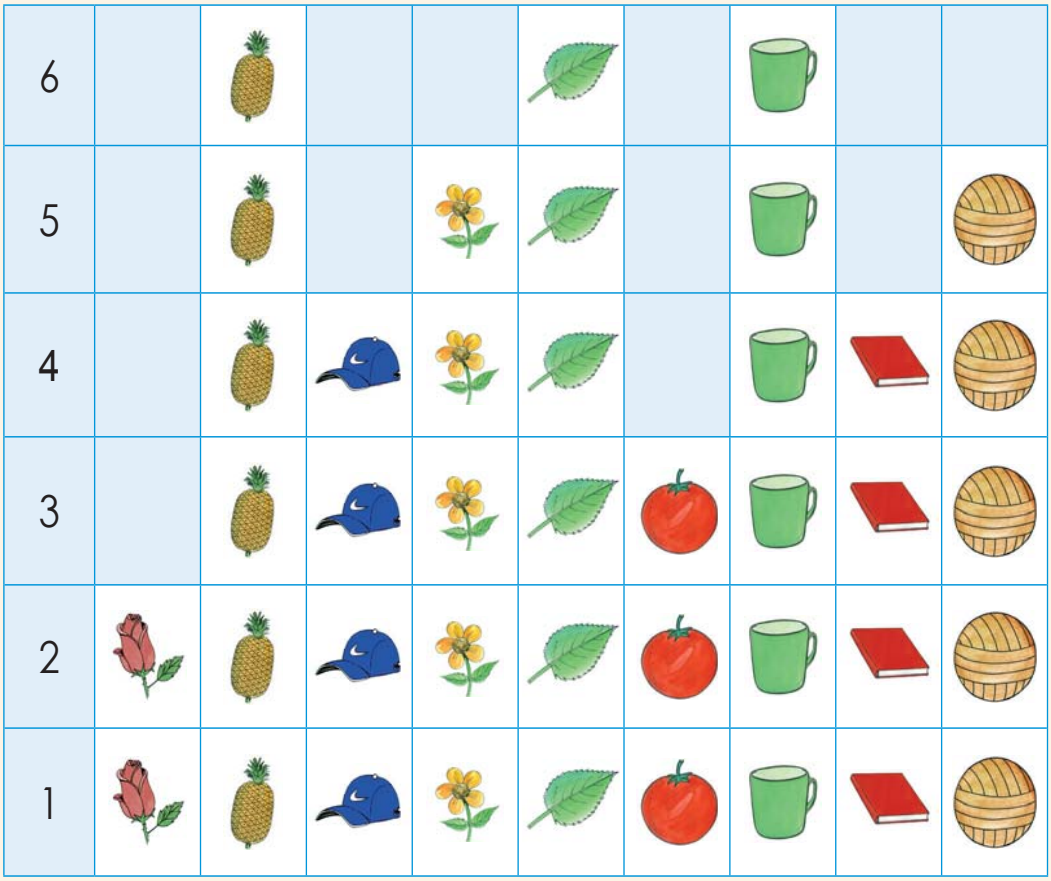
1. Carefully study the following pictures of objects. Group them by putting together the similar objects.
   Count the similar objects and tell their number.



2. Draw a pictograph with the following objects:
   a) 6 pens
   b) 9 bananas
   c) 5 oranges
   d) 3 trees.

END UNIT ASSESSMENT 14

1. Carefully study the following pictograph and answer to the following questions



a) How many flowers are missing in order to have a number of flowers that match with the number 4?

b) Which number that matches with the pineapples?

c) How many tomatoes are on the pictograph?

2. Draw a pictograph with the following pictures: 1 notebook, 5 balls, 3 cups, 2 flowers, and 6 leaves.

END OF YEAR ASSESSMENT

1. Write in figures or in words
   (a) Four hundred ninety five.
   (b) 979:
   (c) Five hundred seventy nine
   (d) 793:
2. Partition these numbers in hundreds, Tens and ones.
   (a) 395: ... (b) 921: ...
3. Complete with the required number
   (a) 6H 9O 4T = (b) 9O 9H 7T = (c) 3O 5T 9H =
4. Use <, > or = to compare the following numbers:
   (a) 324 ☐ 342 (c) 970 ☐ 907
   (b) 325 ☐ 325 (e) 561 ☐ 165
5. Arrange these numbers from the smallest to the biggest number.
   (a) 251, 125, 215, 152 (b) 309, 930, 390, 903
6. Arrange these numbers from the biggest to the smallest number.
   (a) 571, 175, 517,157 (b) 923, 293, 932, 239
7. Add and write the answer
   (a) 123 + 456 = (b) 799 + 102 =
   (c) 345 + 567 = (d) 524 + 415 =
8. Subtract and write the answer
   (a) 997 − 654 = (c) 934 − 912 =
   (b) 756 − 699 = (d) 543 − 497 =
9. Multiply and write the answer

(a)	(b)	(c)	(d)	(e)
91	72	93	64	43
× 6	× 4	× 3	× 2	× 2

10. Divide these numbers

(a) 996 : 2 =

(b) 792 : 3 =

(c) 975 : 5 =

(d) 648 : 4 =

11. Complete by 10 or 100

(a) 45 × ☐ = 450

(b) 7 × ☐ = 700

(c) 99 × ☐ = 990

(d) 9 × ☐ = 900

12. Complete the missing numbers

(a) 945, 900, 855 , ☐, ☐

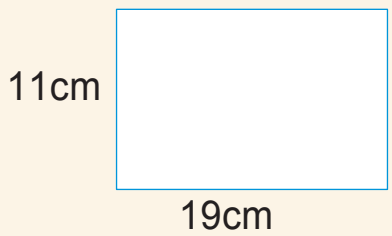
(b) 900, 700, 600, ☐, ☐

13. Complete the following multiplication tables

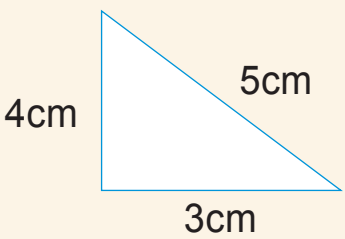
(a) × 2	1	2	3	4	5	6	7	8	9	10
	___	___	___	___	___	___	___	___	___	___
(b) × 3	1	2	3	4	5	6	7	8	9	10
	___	___	___	___	___	___	___	___	___	___
(c) × 4	1	2	3	4	5	6	7	8	9	10
	___	___	___	___	___	___	___	___	___	___
(d) × 5	1	2	3	4	5	6	7	8	9	10
	___	___	___	___	___	___	___	___	___	___
(e) × 6	1	2	3	4	5	6	7	8	9	10
	___	___	___	___	___	___	___	___	___	___

14. Find the perimeter of the following geometric figures

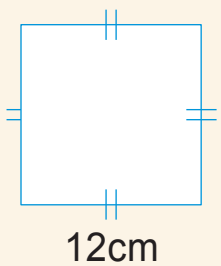
a)



b)

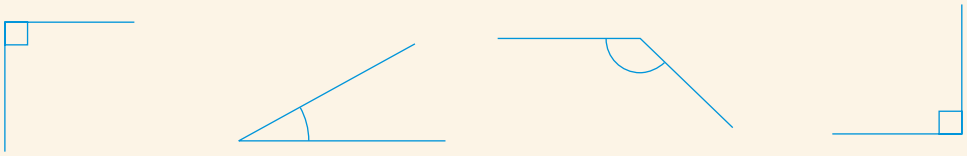


c)



15. Name the following angles

a) **b)** **c)** **d)**



16. Work out the following

(a) 150 dm – 50 dm = ☐ m

(b) 42 dm × 4 = ☐ dm

(c) 75 dm + 250 dm = ☐ m

(d) 121 ℓ × 4 = ☐ ℓ

(e) 455 kg + 544 kg = ☐ kg

(f) 715 kg − 673 kg = ☐ kg

(g) 245 ℓ + 655 ℓ = ☐ ℓ

(h) 4 m = ☐ dm = ☐ cm

(i) 2 m 8 cm = ☐ cm

(j) 200 cm = ☐ dm = ☐ m

(k) 100 cm = ☐ m = ☐ dm

(l) 1000 F = 500 F + ☐ F

(m) 500 F = 100 F + ☐ F + 100 F + 100 F

(n) 100 F = 50 F + ☐ F

(o) 50 F = 20 F + 20 F + ☐ F

17. Use >, < or = to compare the following measurements

(a) 4 m ☐ 4 dm

(b) 5 m 6 cm ☐ 506 cm

(c) 15 dm 6 cm ☐ 156 cm

18. Study the calendar and answer the following questions:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

(a) How many days are in this month?

(b) How many Mondays are in this month?

(c) How many Tuesdays are in this month?

(d) How many weekends does this month have?

(e) What is the last day on this month?

19. Read and tell the time?

a) b) c)

20. Word problems

(a) The total number of pupils of our school is 985. If 512 of them are girls, find the number of boys.

(b) Last year Karisa planted 432trees. This year he planted 515 trees. Find the total number of trees planted.

(c) Kayiranga has 1000Frw. If he buys 1Kg of sugar at 800Frw, how much money will he remain with?

(d) Butera has 500Frw. He needs to buy a book costing 900Frw. How much more money does he need to buy the book?

(e) Last year, Uwamahoro bought 492hens. In this year he bought 508 more hens. Find the total number of hens bought by Uwamahoro in two years.

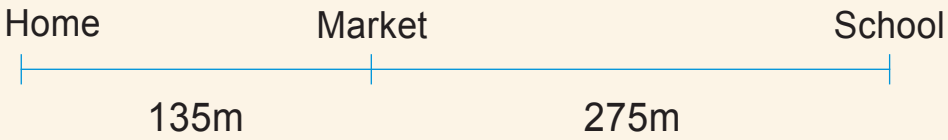
(f) There are 5 rows of chairs in the church. If each row has 101 chairs, find the number of chairs in the church.

(g) Gato paid 800Frw to buy sugar and 100Frw for the bread. How much money did he pay?

(h) I bought 225Kg of rice from the market. When I reach in the village I sold 95 Kg from it. Find the quantity of rice I remained with.

(i) We have a tank containing 550 ℓ of water. If we use 350 ℓ to wash clothes, how much water can we remain with?

(j) Carefully study the picture below showing my way from home to school.



(1) Find the distance from home to school.

(2) Find the distance from home to the market.

(3) Find the distance from the market to school.