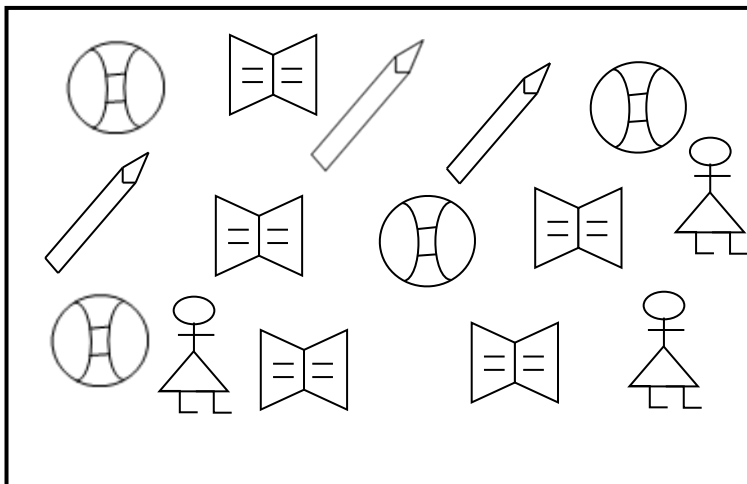


P.1 MATHEMATICS LESSON

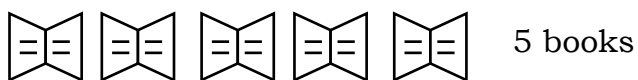
LESSON 1: Sorting real objects



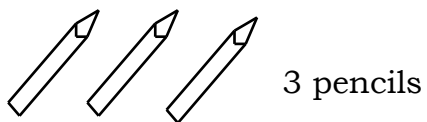
4 balls
3 pencils
3 girls
5 books



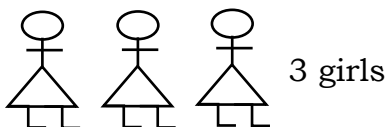
4 balls



5 books

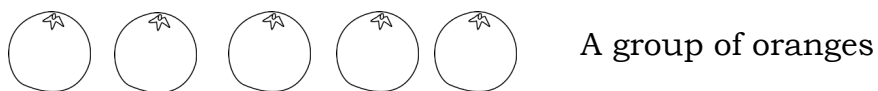


3 pencils



3 girls

Naming different groups



A group of oranges



A group of tins

A SET

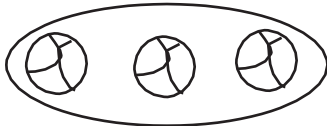
A set is a collection of well defined elements.

A set is a collection of things put together.

Things found in a set are called members/elements.

Naming sets

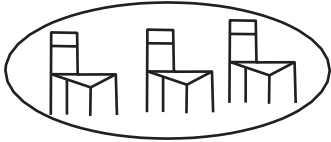
Examples



A set of balls



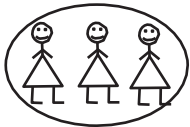
A set of tins



A set of chairs

Activity

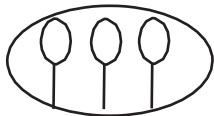
Name these sets

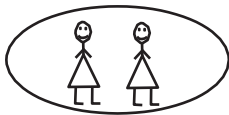


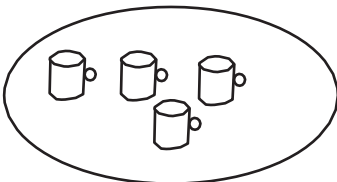








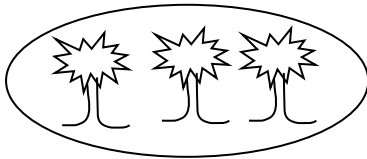




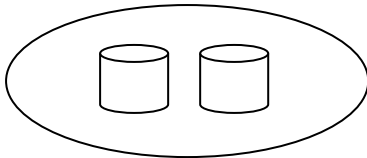


Read and draw sets

A set of 3 trees.



A set of 2 tins.

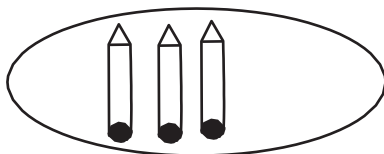
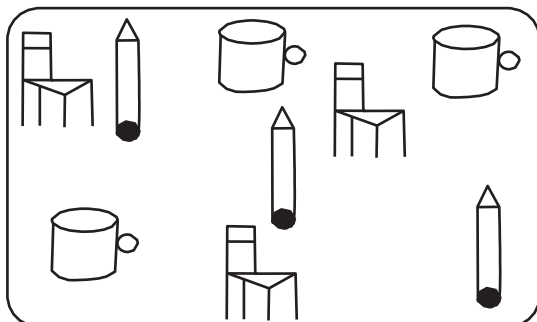


Activity

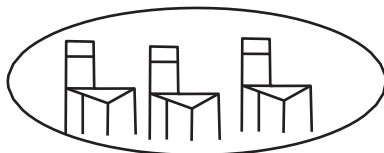
Draw these sets

- a) A set of 5 balls.
- b) A set of 3 pencils.
- c) A set of 1 book
- d) A set of tables

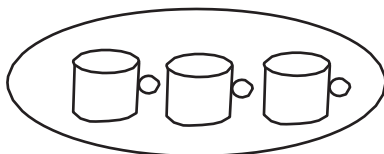
Forming and drawing sets



A set of pencils

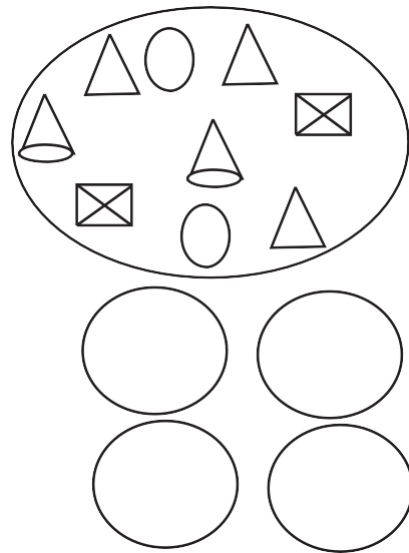
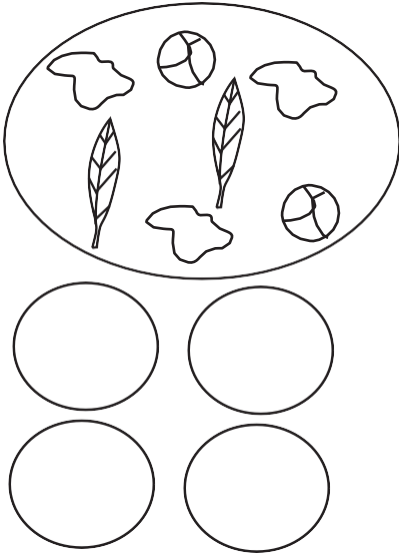


A set of chairs

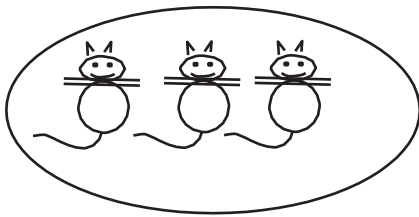


A set of cups

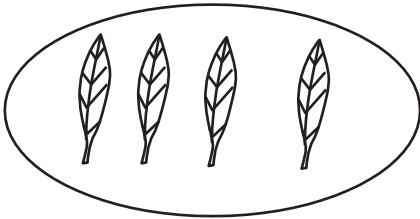
Activity



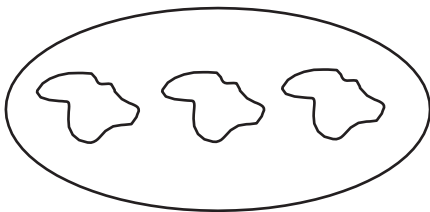
Counting members in a set Examples



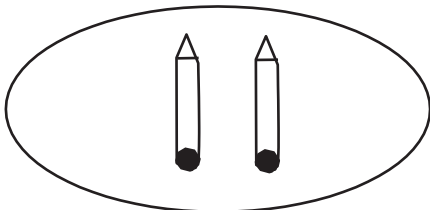
A set of three cats



A set of 4 leaves

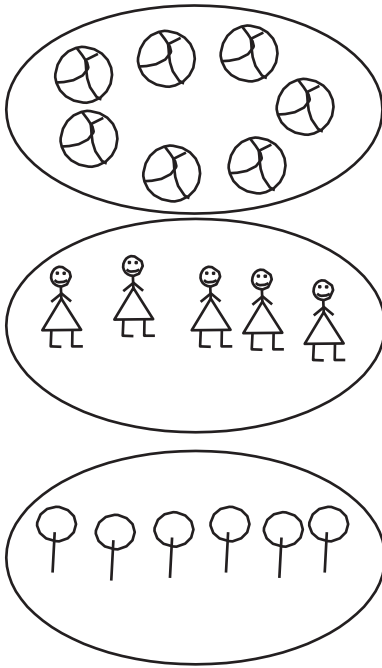


A set of 3 stones



A set of 2 pencils

Activity



Empty sets

An empty set is a set without members
 \emptyset or $\{ \}$ is a symbol for an empty set

Examples

- 1) A set of birds driving cars.

\emptyset

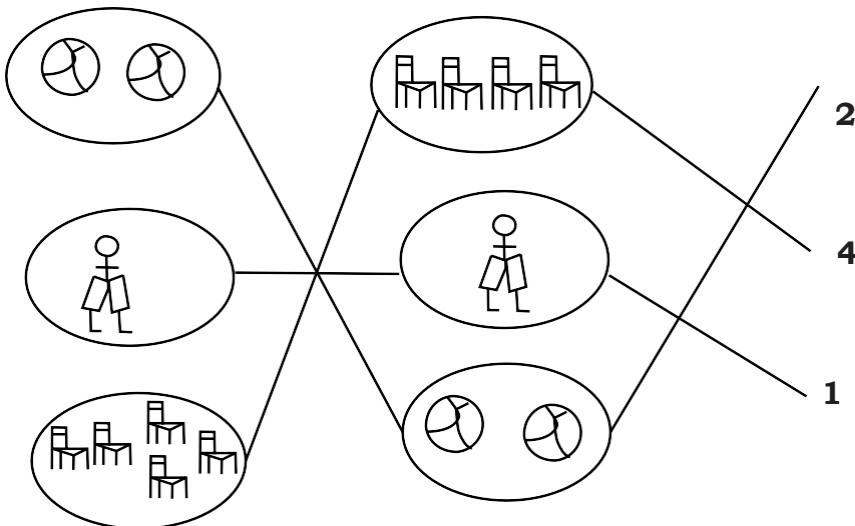
- 2) A set of boys with wings

$\{ \}$

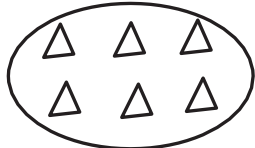
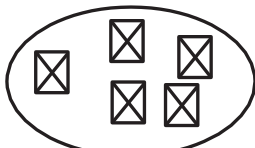
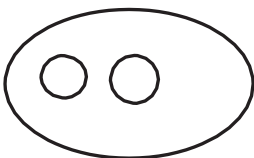
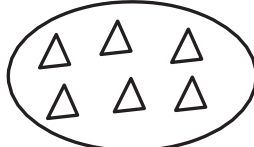
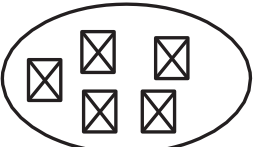
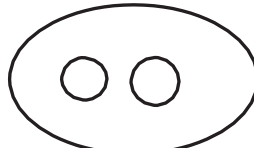
Activity

- a) A set of snakes with two legs
b) A set of men with nine eye

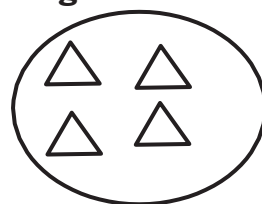
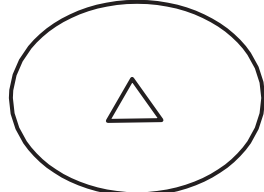
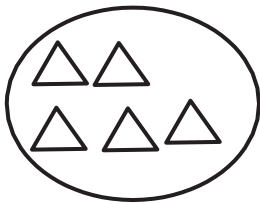
Matching sets

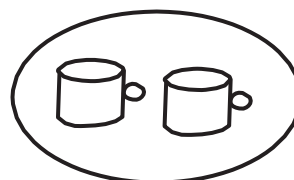
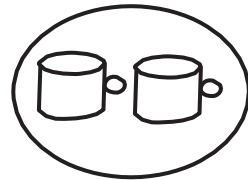
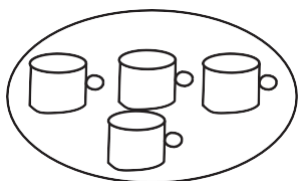


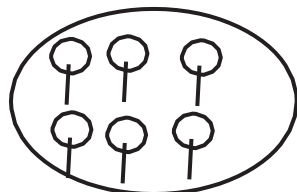
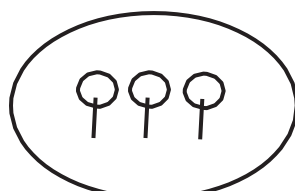
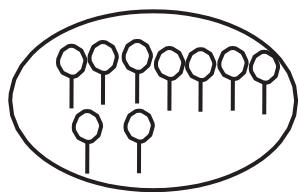
Activity
Match the sets

		2
		6
		5

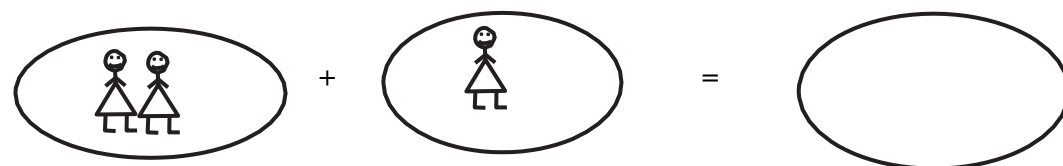
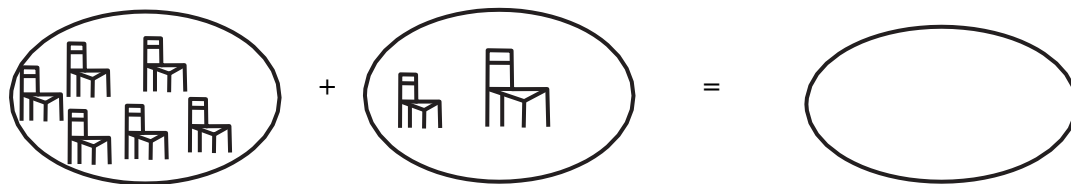
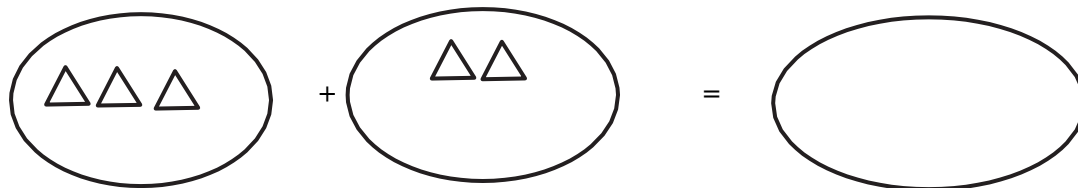
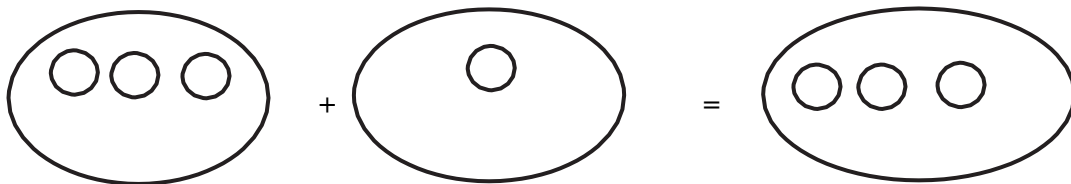
Joining sets

	+		=	
4	+	1	=	5

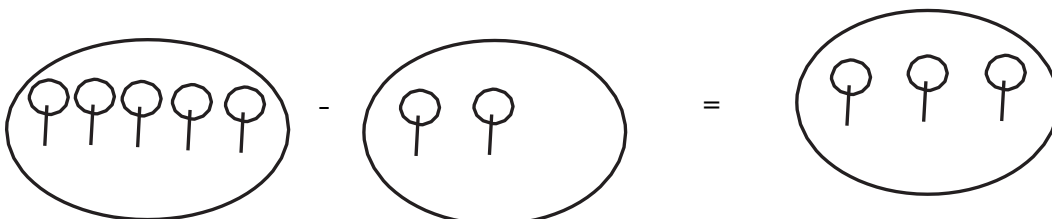
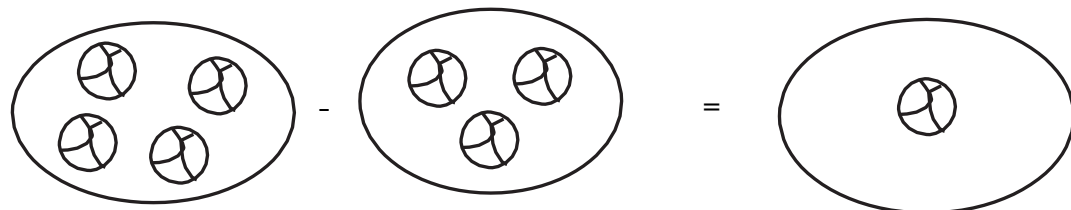
	+		=	
2	+	2	=	4

	+		=	
6	+	3	=	9

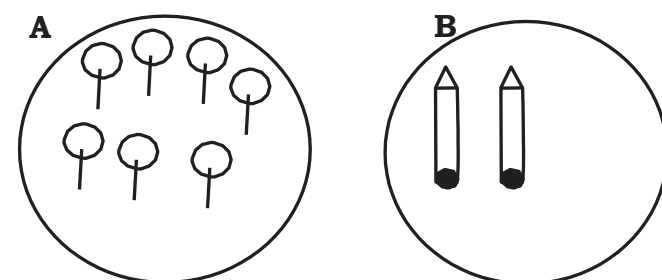
Activity



Disjoining sets



Comparing elements in a set (less or more)



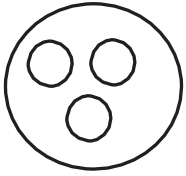
Which set has more members?

Set A has less members

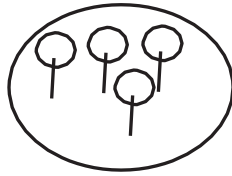
Set B has more members than set A

Activity

A



B



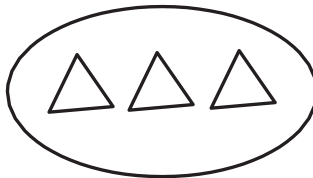
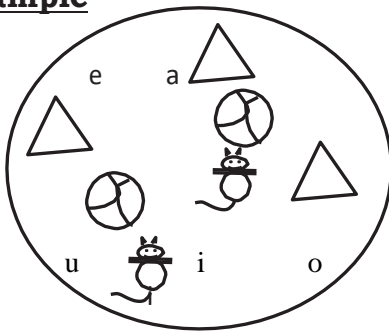
Which set has more members?

Set A has less members

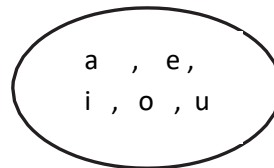
Set B has more members than set A

Forming small sets from big set

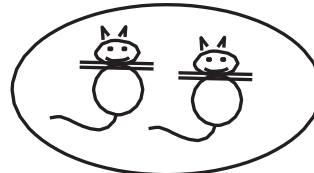
Example



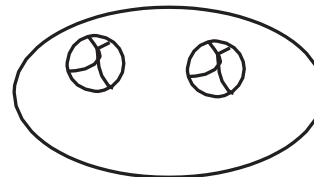
A set of 3 triangles



A set of 5 letters

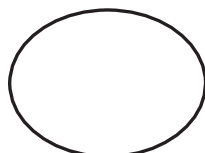
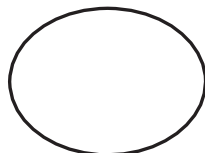
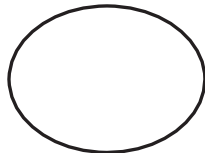
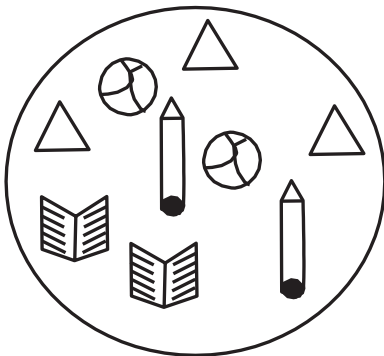


A set of 2 cats



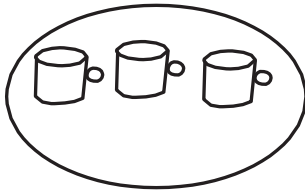
A set of 2 balls

Activity

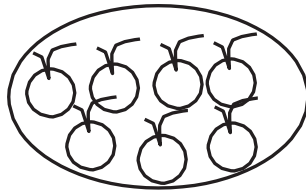


Ordering sets

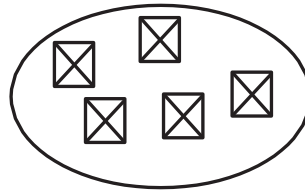
N



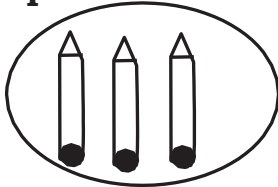
M



R



P



M comes first (1st)

_____ Comes second(2nd)

_____ Comes third (3rd)

_____ Comes fourth(4th)

THEME - NUMERACY

Counting numbers from 0-49

Whole numbers

0,1,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,
27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49

Activity

Fill in the missing numbers

0 ____ 2 ____ 4 ____ 6 ____

4 ____ 6 ____ 8 ____ 10

10,9,8, ____ 6, 5, ____ 3

35, ____ , ____ ,38, ____ ,40

Counting from 50-99/100

50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73
74 75 76 77 78 79 80 81 82 83 84 85 86 87 89 90 91 92 93 94 95 96
97 98 99 100

Activity

Fill in the missing numbers

55, ____, ____ 58,59,

97,98, ____ , ____

81, ____,83,84, ____

____,60 ____ , 62, ____ ,40

Finding the number before

0 1 5 6 67 34

45 23 78 89 9 10

Activity**Write the number before**

_____4	_____12	_____17
_____19	_____20	_____1
_____35	_____10	_____8

Finding the number that comes after

2,3	15,16	8,9
7,8	69,70	
10,11	99,100	

Numbers which come between

0 1 2	30 31 32
3 4 5	15 16 17
7 8 9	14 15 16
10 11 12	

Activity**Fill in the number between**

4_____6	8_____16	7_____9
7_____9	13_____15	10_____12
15_____17	3_____5	0_____2

Arranging numbers in ascending order

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

Activity

6, 1, 3, 4	7, 9, 6, 4
8, 2, 4, 20	9, 10, 11, 0
0, 3, 1, 4	4, 3, 7, 6, 5

Arranging numbers in ascending order

4, 8, 6, 7	0, 3, 2, 1
8, 7, 6, 4	3, 2, 1, 0

Activity

10, 9, 11, 12	10 9 12 13
15, 16, 17, 18	1 2 3 4 5
8, 10, 6, 4,	3 4 5 6 7
6, 4, 7, 1	

Circling the small number

Examples

② or 3

⑦ or 17

40 or ④

4 or ②

③ or 7

⑦ or 13

⑧ or 81

Activity

6 or 9

9 or 3

8 or 4

4 or 1

20 or 30

14 or 15

Number names/words

0- zero

8- eight

14- fourteen

1- One

9- nine

15- fifteen

2- two

10- ten

16- sixteen

3- three

11- eleven

17- seventeen

4- four

12- twelve

18- eighteen

5- five

13- thirteen

19- nineteen

6- six

7- seven

20- twenty

Write the following in words

16____20____13_____

0____11____19_____

Matching number names

twelve

one

three

fourteen

four

five

3

14

12

1

5

4



Activity

Match correctly

two	19	18	eleven
three	12	14	twenty
thirteen	2	17	eighteen
twelve	3	20	fourteen
nineteen	13	11	seventeen

Number names from 10-100 (counting in tens)

10- ten	60-sixty
20- twenty	70- seventy
30-thirty	80-eighthy
40- forty	90- ninety
50-fity	100-one hundred

Activity

Write in words

40	79	20
80	12	13
70	100	40
88	76	55

Number names from 20-30

20 twenty	25- twenty five
21 twenty one	26- twenty six
22 twenty two	27- twenty seven
23 twenty three	28- twenty eight
24 twenty four	29- twenty nine
25 twenty five	30- thirty

Activity

Write in words

21 _____ 28 _____
27 _____ 29 _____
24 _____ 22 _____
23 _____ 25 _____

Fill in the missing letters

twentyf ____ ____r twen ____yn____n ____

Twenty s__v____n

Number words from 30-39

thirty thirty seven
thirty one thirty eight
Thirty two thirty nine
Thirty three
Thirty four
thirty five
thirty six

Match the following correctly

thirty two	35
thirty eight	30
thirty	32
thirty five	38
thirty nine	39

Number names from 40-49

40 -forty
41 -forty one
42-fortytwo
43-fortythree
44-forty four
45- forty five
46-forty six
47- forty seven
48-forty eight
49-forty nine

Activity

Write the following in words

48 42 43

44 49

46 47

Filling in ones



=1 ones



=2 ones



=3 ones



=4 ones



=5 ones



=6 ones

Activity

Fill in correctly



=____ones



=____ones



=____ones



=____ones

Match

Forty 44

Forty one 40

Forty four 41

Drawing ones

3 ones = ○○○

○○○○
○○○ = 7 ones

△△△△
△△△△ = 8 ones

○○○○○
○○○○ = 9 ones

△△△△△ = _____ ones

🦒🦒🦒🦒 = _____ ones

🦒🦒🦒🦒🦒🦒 = _____ ones

8 ones = ○○○○○○○○

4 ones = ○○○○

2 ones = ○○

1 ones = ○

Activity

Draw ones

8ones =

4ones =

9ones =

5 ones =

6 ones =

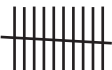
1ones =

7ones =


3ones =

2ones =

Drawing tens

 = 1 tens

 = 2 tens

 = 3 tens

2tens= 

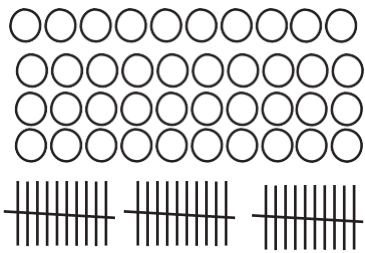
5tens = 

Activity

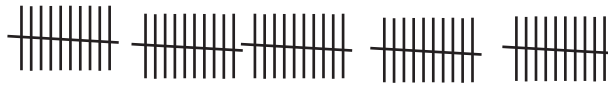
1.Fill in the missing tens

 = _____tens

 = _____tens



= _____tens



= _____tens

2. Draw the tens

2tens=

5tens=

7tens=

4tens=

1tens=

6tens=

Filling in tens and ones

64 = 6 tens 4 ones

7 tens 0 ones = 70

8 = 0 tens 8 ones

4 tens = 40

3 ones = 3

Activity

Fill in the missing tens and ones

5 tens 3 ones = _____

_____ tens _____ ones = 45

80 = _____ tens _____ ones

5 = _____ tens _____ ones

9 tens = _____

Drawing tens and ones

12 =

20 =

04 =

Activity

Draw bundles

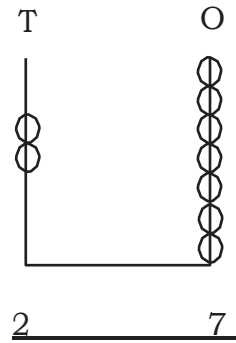
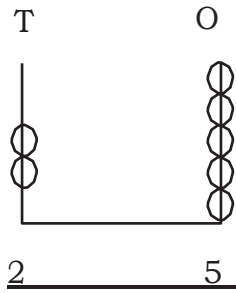
13 =

05 =

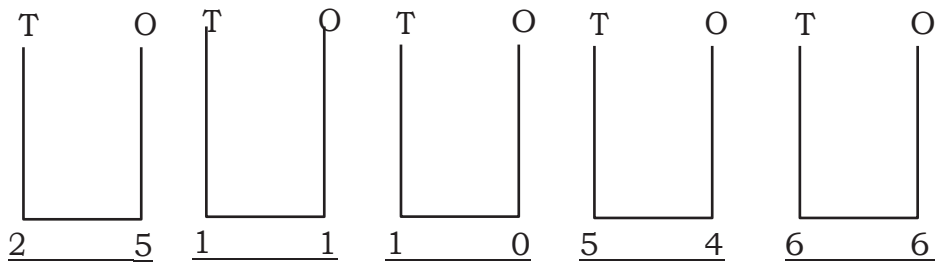
40 =

Showing numbers on the abacus

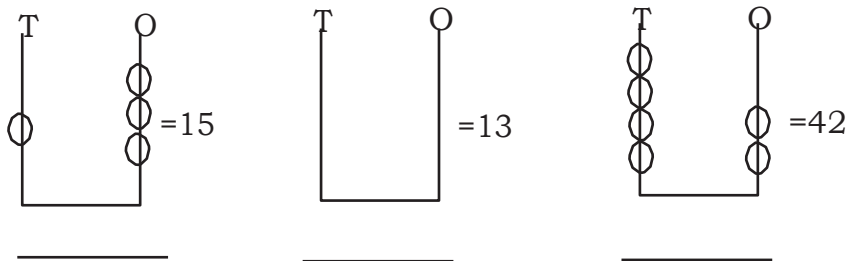
Examples



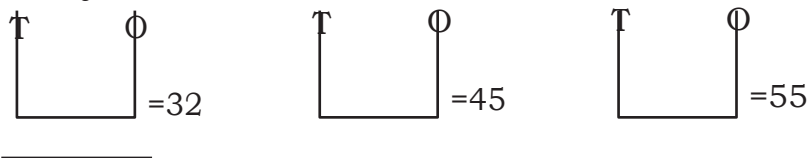
Complete the following



Representing numbers on the abacus

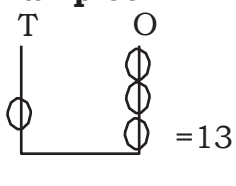


Activity



Writing place values of the circled digits

Examples



b) 4 5

c) ⑥ 4 - Tens

d) ① 7 - Tens

Activity

What is the place value of the circled numbers?

⑨ 4 7 ⑦ ② 1 ③ 3

⑧ ② 5 4 ② 5 ⑩

Writing place values of the underlined numbers

Examples

3 0 ones
5 1 ones
8 7 tens
6 3 tens

Exercise

Write the place values of the underlined numbers

Addition of one digit number horizontally

Examples

00 000 000 0 00
2 + 3 = 5 3 + 1 + 2 = 6

00 0000 0000 00 00
2 + 4 = 6 4 + 2 + 2 = 8

00 0
2 + 1 = 3

0000 000
000 00
7 + 5 = 12

Activity

3+1= 3+3=
9+7= 4+2=
5+5= 2+2=
3+2= 5+6=
7+7= 8+0=

Addition of one digit vertically

Examples

200
+ 200
—
4

3000
+ 500000
—
8

Activity

5balls
+1 ball

6
+3

6
+2

3
+6

Addition involving words

Examples

1. 1book plus2 books equals 3 books

2. 5bags +3 bags = 8bags

3. 3 boys plus2 boys give 5boys

Activity

1. 3 girls plus 2 girls equals

2. 1 box plus 4 boxes equals

3. 4 tables plus5 tables equals

4. 9 pencils plus 0 pencils equals

5. 3 boys plus 2 boys give

6. Apio has3 tins. Aisha has 4 tins. How many tins do they have altogether?

Kate has 2 dusters. Jane has 8dusters.Howmanydusters do they have altogether?

Addition of two digit number vertically

Example

T	O	T	O	T	O
1	1 0	200	200	3 000	3 000
+	2 00	+	1 4 0000	+	3 000
1	3	3	6	6	6

Activity

T	O
5	5
+	0 1

Addition of numbers involving words

Mary has 6 pots. Ivan has 6pots. How many pots do they have altogether?

6pots + 6pots= 12pots

Jady had 3 cups. Daddy gave her 7 more pots. How many pots did she have altogether?

3cups +7 cups =10 cups

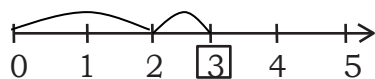
Activity

1. Musa had 8apples. Ali gave more 8 apples. How many apples did he have altogether?
2. Who has more apples?
3. Liz ate 12 eggs in the morning. Lisa ate6eggs.
 - a) How many eggs did the two eat altogether?
 - b) Who ate more eggs?
 - c) Who ate less eggs?
4. Daddy has three baskets. Mummy has six baskets. How many baskets do they have altogether?

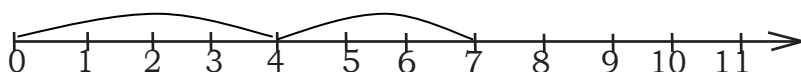
Addition using a number line

Examples

$$2 + 1 = 3$$



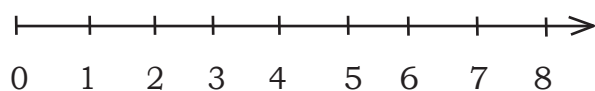
$$4 + 3 = 7$$



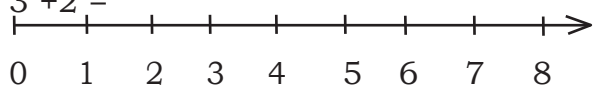
Activity

Add using a number line

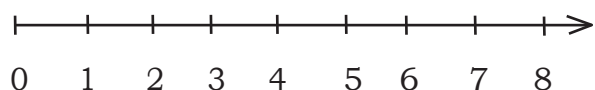
$$2 + 2 =$$



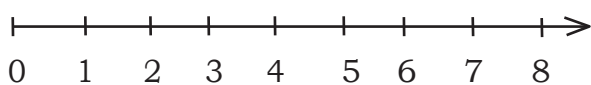
$$3 + 2 =$$



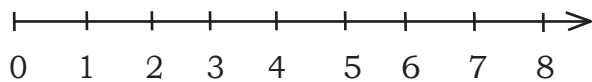
$$3 + 2 + 2 =$$



$$5 + 4 =$$



$$5 + 0 =$$



Subtraction of one digit number horizontally

Examples

a) $4 - 2 = 2$

0000
0000

b) $8 - 3 = 5$

000000
0000

c) $10 - 4 = 6$

0000
00

d) $6 - 4 = 2$

Activity

$1 - 9 - 3 =$

$2 - 10 - 5 =$

$3 - 6 - 3 =$

$4 - 8 - 3 =$

$5 - 9 - 6 =$

$6 - 7 - 2 =$

$7 - 8 - 8 =$

$8 - 4 - 0 =$

$9 - 7 - 1 =$

Subtraction of numbers without regrouping

Examples

8 000000
00

$- 3$

5

000000
9 000

$- 0$

0

7

$- 4$

3

9

$- 9$

0

Activity

4

$- 4$

5

$- 3$

9

$- 5$

4

$- 3$

Subtraction of numbers involving words

Examples

Four take away two equals

two Six minus six equals zero

Seven take away two equals five

Ten minus seven equals three

Mother had eight eggs. She gave away one egg to Mary. How many remained?

8eggs -1 egg = 7eggs

Activity

1. Eight take away four equals
2. Ten minus seven equals
3. Twelve takeaway three equals
4. Four takeaway two equals
5. Two minus two equals

Subtraction of two digit numbers vertically

Examples

$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 5 \\ - 1 \quad 2 \\ \hline 2 \quad 3 \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ 2 \quad 8 \\ - \quad 8 \\ \hline 2 \quad 0 \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ 8 \quad 9 \\ - 3 \quad 6 \\ \hline 5 \quad 3 \end{array}$$

Activity

$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 4 \\ - 2 \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ 6 \quad 4 \\ - 2 \quad 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ 2 \quad 8 \\ - 1 \quad 3 \\ \hline \end{array}$$

Word problems involving subtraction of numbers

Eleven take away four = 7 seven

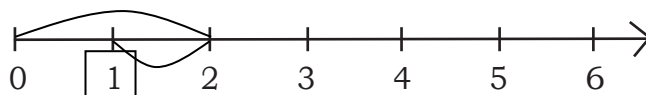
$$11 - 4 = 7$$

Four take away zero equals four

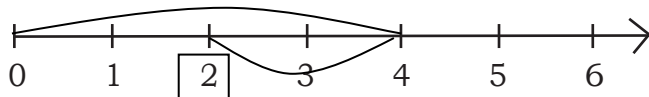
$$4 - 0 = 4$$

Subtraction using a number line

$$2 - 1 = 1$$



$$4 - 2 = 2$$



Activity

Subtract using a number line

$4-2=$

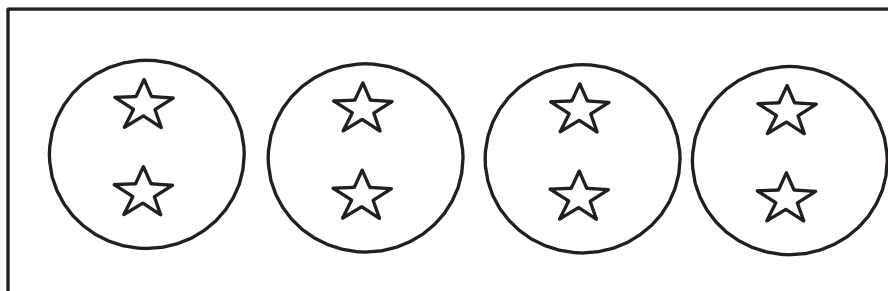
$5-3=$

$6-4=$

$7-3=$

Ringing/forming groups

Examples



4groups

How many groups have you made?

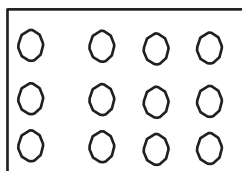
4groups

How many stars are there altogether?

8stars

Activity

Form groups of 4




a) How many groups have you made?


b) How many eggs are they altogether?

Drawing groups

Examples

1. 2groups1=2 

2. 3groups2=6 

3. 2groups2=4 

Activity

3 Groups of 2

6 groups of 2

4 Groups of 2

3 groups of 3

5 Groups of 2

2 groups of 1

Multiplication of one digit horizontally

$2 \times 1 = 2$



$5 \times 3 = 15$



$4 \times 2 = 8$



$4 \times 3 = 12$



Activity

Work out the following

$3 \times 4 =$

$6 \times 2 =$

$9 \times 3 =$

$9 \times 2 =$

$3 \times 3 =$

Multiplication horizontally

Examples

$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 6 \\ \times 3 \\ \hline 18 \end{array}$$

Activity

Multiply

$$\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$$

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

$$\begin{array}{r} 6 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \\ \times 2 \\ \hline \end{array}$$

Multiplication of two digits vertically

$$\begin{array}{r} 32 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ \times 2 \\ \hline \end{array}$$

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

Word problem solving

Examples

One bird has two eyes. How many eyes do 3 birds have?

$$2 \text{ eyes} \times 3 = 6 \text{ eyes}$$

Word problem involving multiplication of numbers

Examples

1. One bird has two eyes. How many eyes

do 3 birds have? $2 \text{ eyes} \times 3 = 6 \text{ eyes}$

2. How many legs do four boys have?



$$4 \times 2 = 8 \text{ legs} \quad = 8 \text{ legs}$$

Activity

1. How many fingers do three grandmothers have?
2. One girl has two ears. How many ears do 5 boys have?
3. Four balls are put in each basket. How many balls will be in 2 baskets?
4. Two beads are put on each string. How many beads will be on 8 strings?
5. Four times two equals

Word problem solving

Examples

1. One bird has two eyes. How many eyes do 3 birds have?

$$2 \text{ eyes} \times 3 = 6 \text{ eyes}$$

2. How many legs do four boys have? $4 \times 2 = 8 \text{ legs}$

Activity: MK MTC book page 44

Multiplication of 3 digit numbers

Examples

$$\begin{array}{r} 300 \\ \times 2 \\ \hline 600 \end{array}$$

$$\begin{array}{r} 123 \\ \times 2 \\ \hline 246 \end{array}$$

$$\begin{array}{r} 231 \\ \times 2 \\ \hline 462 \end{array}$$

Activity

$$\begin{array}{r} 100 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 222 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 311 \\ \times 2 \\ \hline \end{array}$$

Counting in twos

Examples

$$2\text{twos} = 2+2=4$$

$$3\text{twos} = 2+2+2=6$$

$$3\text{twos} = 2+2+2=6$$

$$2+2+2+2 = 4\text{ twos}=8$$

$$2+2+2+2+2 = 5\text{twos}=10$$

Activity

$$9\text{two} =$$

$$4\text{ twos} =$$

$$5\text{ twos} =$$

$$3\text{twos} =$$

$$3\text{twos} =$$

$$6\text{twos} =$$

$$7\text{twos} =$$

$$8\text{twos} =$$

Multiplication of 2 as repeated addition

Examples

$$2+2+2+2 = 2 \times 3 = 6$$

$$2+2 = 2 \times 2 = 4$$

Activity

Multiply 2 as repeated addition

$$2+2+2 = \underline{\quad} = \underline{\quad}$$

$$2+2+2+2+2 = \underline{\quad} = \underline{\quad}$$

$$2+2+2 = \underline{\quad} = \underline{\quad}$$

$$2+2+2+2 = \underline{\quad} \times \underline{\quad}$$

$$2+2 = \underline{\quad} \times \underline{\quad}$$

$$2+2+2+2+2+2 = \underline{\quad}$$

Application of multiplication

Two twos are four

Three twos are six

One two is two

Five twos are ten

Ug. Primary MTC bk1 page 60 New MK bk1 pg83- 84

Activity

Multiply

$$\text{Two twos} =$$

$$\text{twos} =$$

$$\text{Six twos} =$$

$$\text{Seven twos} = \text{Four}$$

$$\text{Nine twos} =$$

$$\text{Five twos} =$$

Counting in threes

1 three = 3

2 threes = $3+3=6$

3 threes = $3+3+3=9$

4 threes = $3+3+3+3=12$

Complete

5 threes = $3+3+3+3+3=$

7 threes = $3+3+3+3+3+3+3=$

8 threes = $3+3+3+3+3+3+3+3=$

10 threes =

6 threes =

9 threes =

One three =

Counting in fives

Examples

0, 5, ____, 15, 20, 25, 30, 35

10, 15, 20, 25, 30, 35

25, 30, 35, 40, 45, 50, 55

Activity

Count in fives

30, ____, 40, 50

15, ____, ____, 30, ____,

20, ____, 30, ____, 40

5, 10, 15, 20, 25, ____, ____, 35

50, 55, ____, ____, 70, ____,

90, 85, 80, ____, 70

Application of multiplication

One five is five $5 \times 1 = 5$

Two fives are ten $5 \times 2 = 10$

Three fives are fifteen

Four fives are twenty five

Five fives are twenty five

Activity

Six fives = $10 \text{ fives} =$

Seven fives = $2 \text{ fives} =$

Eight fives =

Nine fives =

Counting in tens

1 ten = 10

2 tens = $10+10=20$

3 tens = $10+10+10=30$

4 tens = $10+10+10+10=40$

5 tens = $10+10+10+10+10=50$

Activity

Fill in missing tens

10,20,30,__,____,60

30,__,____,60,__,80

100,90,80,70,__,____,

22,33,__,____,____

Ordinary numbers

1 -1st

2 -2nd New MKPr. Maths pupils book page 102-103

3 -3rd

4 -4th

5 -5th

6 -6th

7 -7th

8 -8th

9 -9th

10-10th

Activity

Match correctly

1	6 th	second
4	3 rd	fourth
2	1 st	sixth
3	4 th	third
6	2 nd	first

Write in words

11th

7th

14th

9th

25th

Writing ordinal number in words

1 st first	7 th seventh	12 th twelfth
2 nd second	8 th eighth	13 th thirteenth
3 rd third	9 th ninth	14 th fourteenth
4 th fourth	5 th fifth	6 th sixth

Activity

Fill in the missing letters

fi__st sixt__ n

S__co__ d

Th__ __d

Write in words

2nd

1st

4th

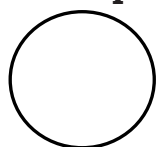
10th

9th

3rd

Identifying shapes

Examples



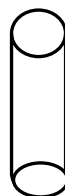
Circle



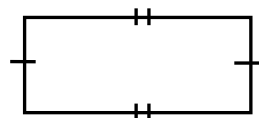
Oval



Cone



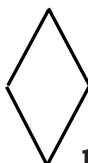
Cylinder



rectangle



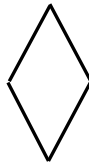
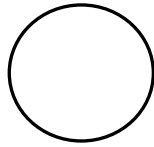
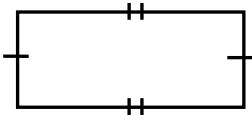
square



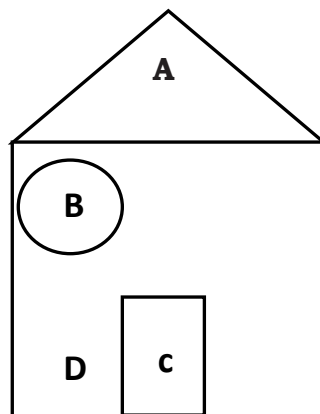
kite

Activity

Name the following



Naming shapes



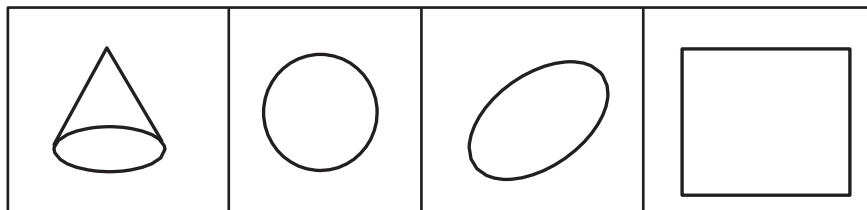
A. triangle

B. Circle

C. _____

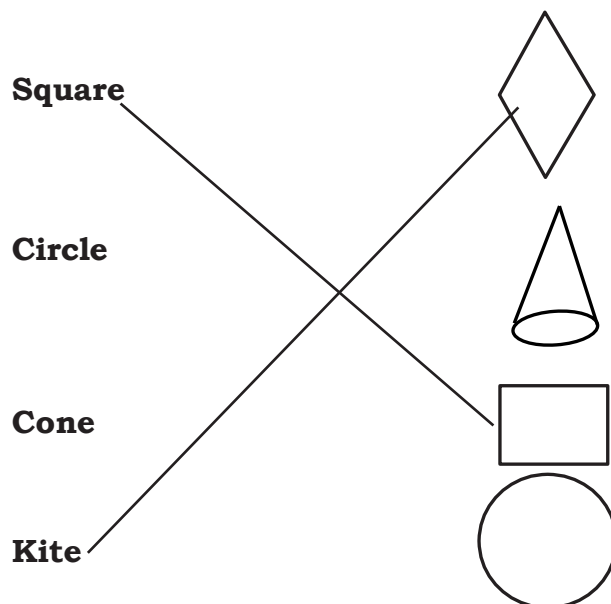
D. _____

Drawing these shapes and tracing



Reading and matching sorting objects

















Example



GRAPHS

Pictorial graph

Five children were asked to pick flowers

Tom	 
Ali	
Tina	     
Paul	   
Peter	  

- a) Who picked more flowers?
- b) _____ and _____ have the same number of flowers.
- c) Who has two flowers?
- d) Who picked few flowers?
- e) How many flowers do they have altogether?

Drawing picto graphs

Four girls were given books as follows.

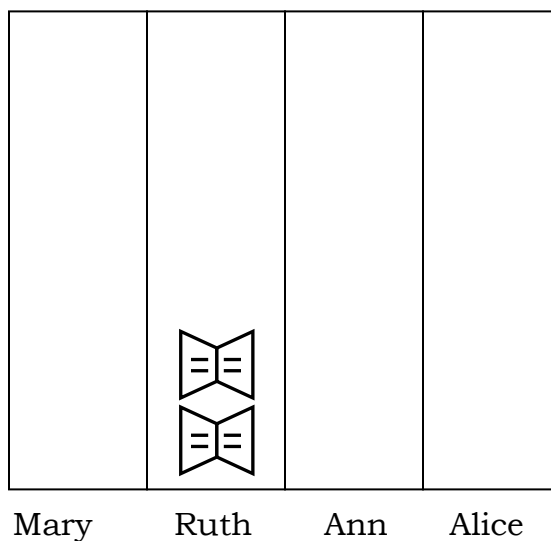
Mary got 4 books

Ruth got 5 books

Ann got 2 books

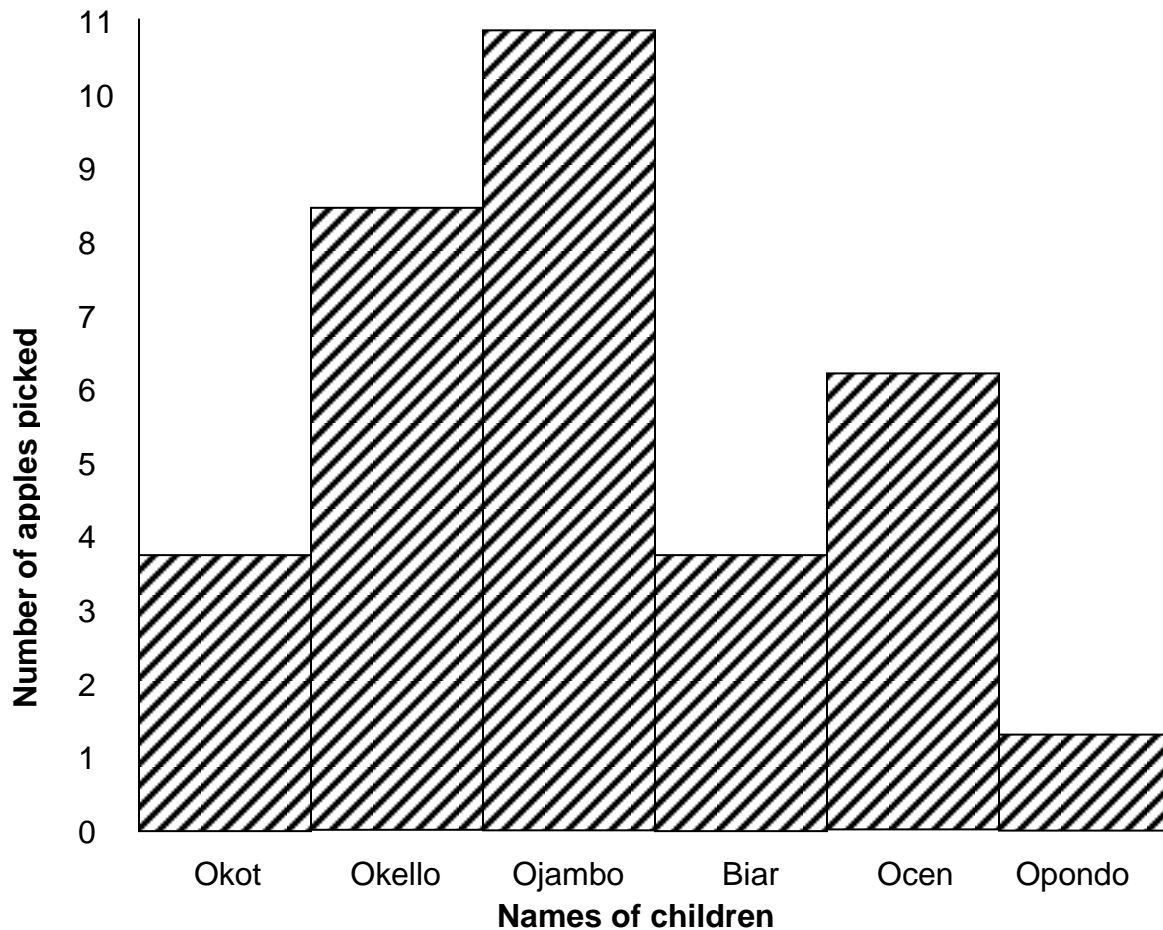
Alice got 3 books

Complete the picture graph below.



BAR GRAPH

Study the bar graph below and use it to answer the questions that follow.



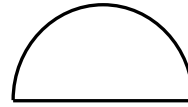
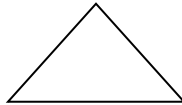
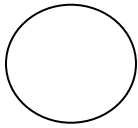
- a) How many children got apples?
- b) Who picked the biggest number of apples?
- c) Who picked the same number of apples?
- d) Who picked the smallest number of apples?
- e) _____ picked seven apples.
- f) Who picked six apples?

TERM TWO

FRACTIONS

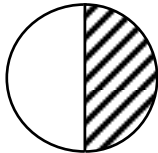
Definition of a fraction and examples.

A fraction is a part of a whole.



Examples

$\frac{1}{2}$ a half



$\frac{1}{3}$ a third



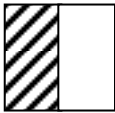
$\frac{1}{4}$ a quarter



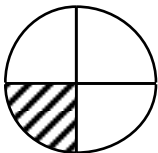
Exercise

Name the fractions

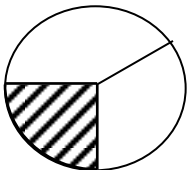
$\frac{1}{2}$



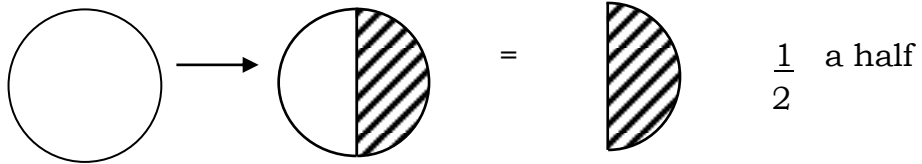
$\frac{1}{4}$



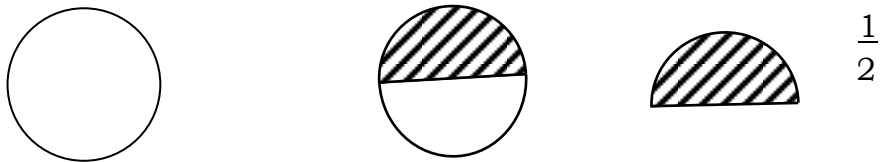
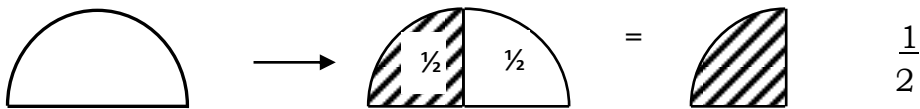
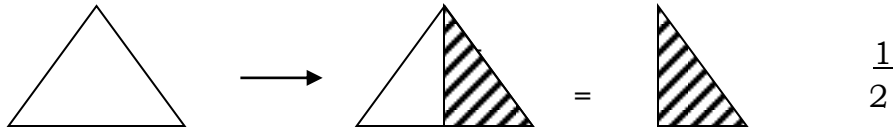
$\frac{1}{3}$



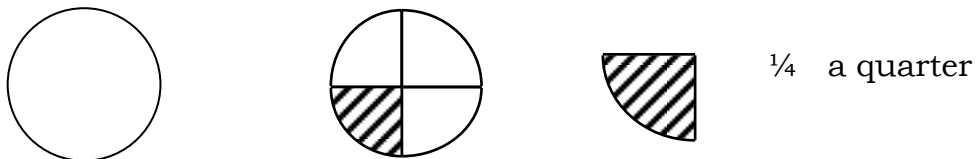
Drawing and shading a half.



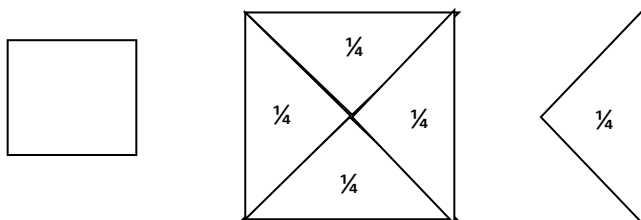
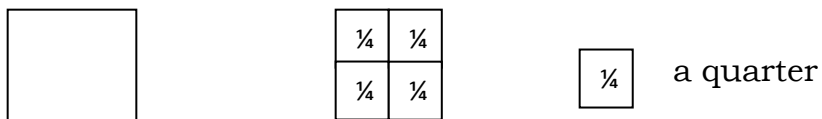
Exercise



Drawing and shading a quarter



Exercise

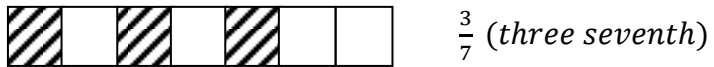
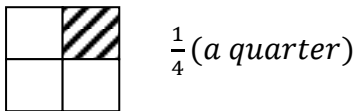
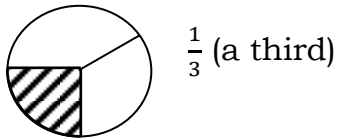
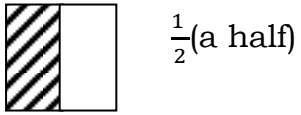


Naming fractions

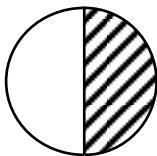
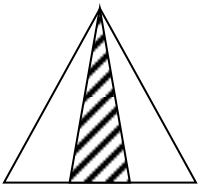
1 → Numerator

2 → Denominator

Name the shaded parts

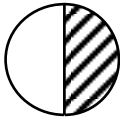


Exercise



Shade the following

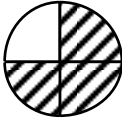
$$\frac{1}{2}$$



$$\frac{5}{7}$$



$$\frac{3}{4}$$



Exercise

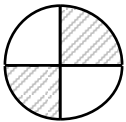
Shade the fractions



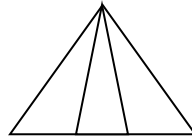
$$\frac{1}{2}$$



$$\frac{3}{5}$$



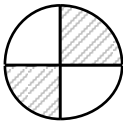
$$\frac{1}{4}$$



$$\frac{2}{3}$$

Shaded fractions

Write the shaded fractions

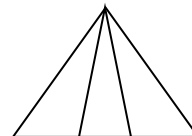
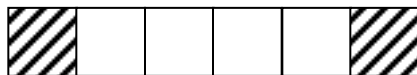
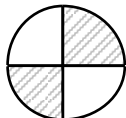


$$\frac{2}{4}$$



Unshaded fractions

Write the unshaded fractions



Addition of fractions

$$\text{Add: } \frac{1}{4} + \frac{2}{4} = \frac{1+2}{4} = \frac{3}{4}$$

$$\frac{2}{8} + \frac{3}{8} = \frac{2+3}{8} = \frac{5}{8}$$

$$\frac{1}{2} + \frac{1}{2} = \frac{1+1}{2} = \frac{2}{2} = 1$$

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{1+1+1}{4} = \frac{3}{4}$$

Exercise

$$\frac{2}{4} + \frac{1}{4} =$$

$$\frac{3}{5} + \frac{1}{5} =$$

$$\frac{1}{3} + \frac{1}{3} =$$

$$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$$

$$\frac{3}{7} + \frac{2}{7} + \frac{1}{7} =$$

Word problem on addition

Add $\frac{1}{2}$ and $\frac{1}{2}$

$$\frac{1}{2} + \frac{1}{2} = \frac{1+1}{2}$$

$$= \frac{2}{2} = 1$$

Find the sum of $\frac{3}{5}$ and $\frac{1}{5}$

$$\frac{3}{5} + \frac{1}{5} = \frac{3+1}{5} = \frac{4}{5}$$

Exercise

Add $\frac{3}{7}$ and $\frac{2}{7}$

$$= \frac{4-2}{7}$$

$$= \frac{2}{7}$$

$$\frac{6}{8} - \frac{4}{8} = \frac{2}{8}$$

Exercise

$$\frac{5}{7} - \frac{4}{7} =$$

$$\frac{4}{8} - \frac{3}{8} =$$

$$\frac{2}{2} - \frac{1}{2} =$$

$$\frac{9}{11} - \frac{6}{11} =$$

$$\frac{5}{11} - \frac{4}{11} =$$

$$\frac{3}{4} - \frac{0}{4} =$$

Word problem on subtraction of fractions

Subtraction

$$\frac{2}{2} - \frac{1}{2} = \frac{2-1}{2}$$

$$= \frac{1}{2}$$

$$\frac{4}{9} \text{ minus } \frac{3}{9}$$

$$\frac{4}{9} - \frac{3}{9} = \frac{4-3}{9} = \frac{1}{9}$$

Exercise

Find the difference of $\frac{4}{8}$ and $\frac{1}{8}$

$\frac{7}{8}$ minus $\frac{5}{8}$ equals

$\frac{3}{4}$ take away $\frac{1}{4}$ equals

What is the difference of $\frac{8}{9}$ and $\frac{6}{9}$

MEASURES

Money

Recognizing different money denominations.

Money is a medium of exchange.

There are two forms of money

1. Paper money
2. Coin money

Paper money (notes)

Examples of money and features on money

50 shilling coin - A head of a Kob

100 shilling coin - A cow

200 shilling coin - A fish

500 shilling coin - A head of crested crane

Notes/paper money

1,000 note

2,000 note

5,000 note

10,000 note

20,000 note

50,000 note

Shs. /= means Shillings

Ref. Understanding Mathematics Bk.1 Pg.14

Addition of money horizontally

Shs. 50 + Shs. 50 = Shs.100

100/= + 200/= = 300/=

Shs. 2 + Shs. 4 = Shs. 6

Addition of money vertically
Examples

Sh. 30	Sh. 20	Sh. 250	sh. 400
+sh. 40	+ Sh. 80	+ Sh. 300	+sh. 300
<hr/> sh. 70	<hr/> Sh. 100	<hr/> Sh. 550	<hr/> sh. 700

Mk Old edition pupils Bk.1 Pg.127

Word problems involving addition of money

A book costs Sh. 200

How much will I pay for 2 books altogether

Activity

- Shs. 200 plus Shs. 400 gives ____
- A pencil costs Shs. 100. A ruler costs Shs. 500
How much money do the two items cost altogether?
- 400/= plus 300/= equals
- Ali had Shs. 100. His dad gave him another Shs. 300
How much money does he have now?

MK Bk 1 Pg.129

Subtraction Money

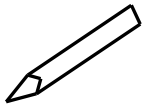
Examples

Sh.500	Sh.450	Sh.40
- Sh.200	- Sh.250	- Sh. 10
<hr/> Sh.300	<hr/> Sh.200	<hr/> Sh. 30

- 800/= minus 100/= equals ____
700/= minus 200/= equals ____
700/= minus 200/= equals ____

Ref MK pupils book 1 page 130

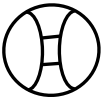
SHOPPING



Shs.50



Shs.100



Shs.500



Shs.700



Shs.500

- a) How much is a book?
- b) Which item costs shs.100/=
- c) What is the cheapest item?
- d) How much is a cup and a ball altogether?
- e) Which items cost the same amount?
- f) Which item is more expensive?

TIME

Fact about time

There are 24 hours in a day.

There are 60 minutes in 1 hour

There are 60 seconds in 1 minute

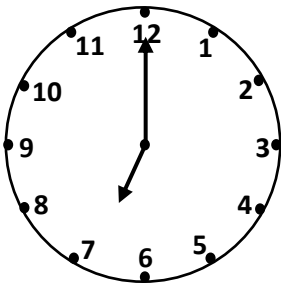
There are two main hands on a clock face

- The minute hand (long hand)
- The hour hand (short hand)

There are two systems of time

- 12 hour clock
- 24 hour clock

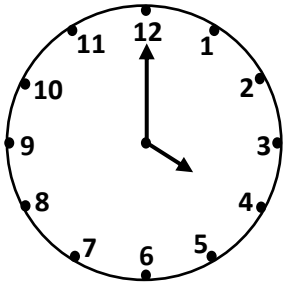
Telling time in full hours (exact time)



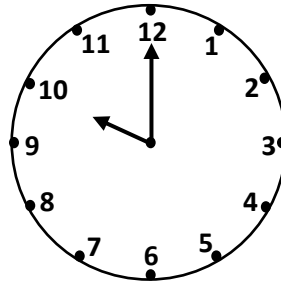
It is 7 o'clock

Activity

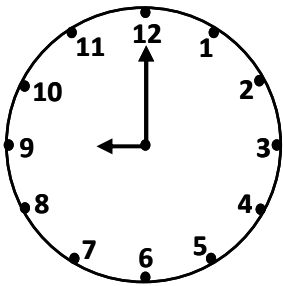
What is the time?



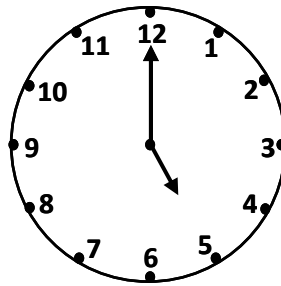
It is ____ o'clock



It is ____ o'clock

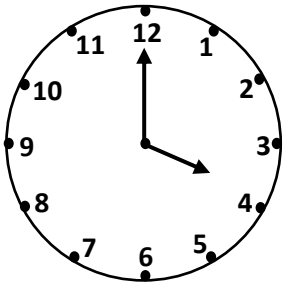


It is ____ o'clock

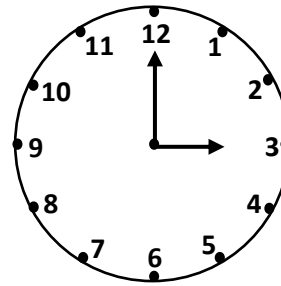


It is ____ o'clock

Showing time in full hours

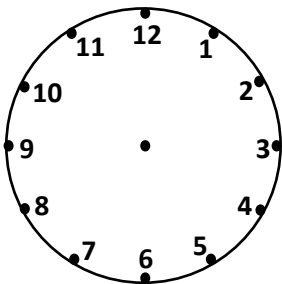


It is **4** o'clock

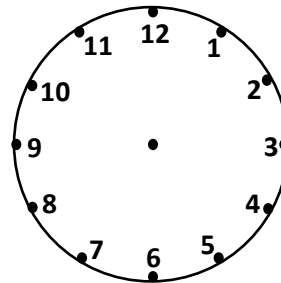


It is **3** o'clock

Activity

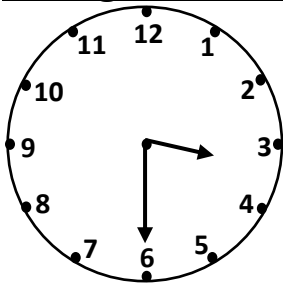


It is 6 o'clock

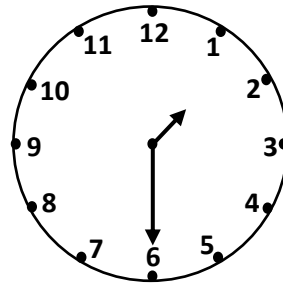


It is 8 o'clock

Telling time in half hours

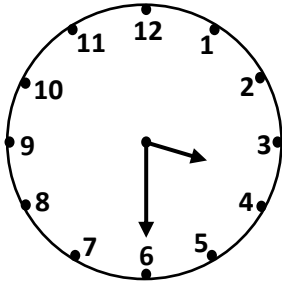


It is a half past 3

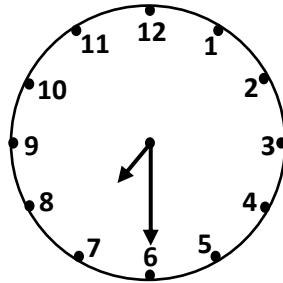


It is a half past 1

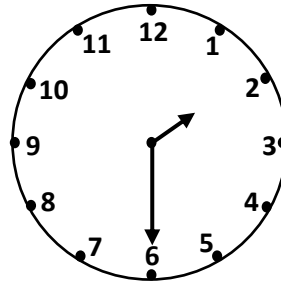
Activity



It is _____

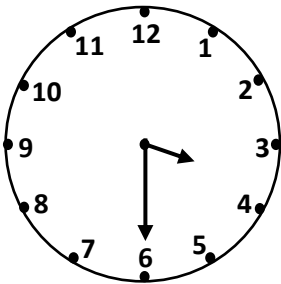


It is _____



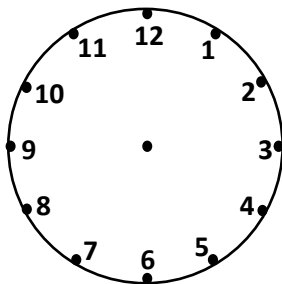
It is _____

Showing time in half hours

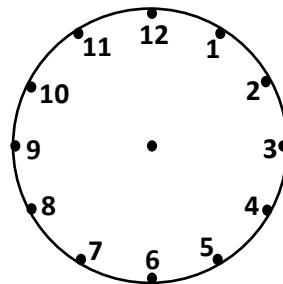


It is half past three

Activity



It is a half past ten o'clock



It is half a half past 1

Complete correctly

1 day	12 months
1 week	60 minutes
1 hour	7 days
1 year	24 hours

MK MTC Bk 3 Pg.130

Days of the week

There are seven (7) days in a week. These are;

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Activity

- Fill in the missing letters
a) M ____ nday b) Frid ____ y c) Thu ____ sday
- What is the last day of the week?
- Write the first day of the week.
- On which day do Christians go to church?
- If today is Saturday, tomorrow will be a _____
- On which day do Muslims go for Juma prayers?
- How many days make 2 weeks?
- What is the third day of the week?

MK MTC Bk.1 Pg. 114 – 116

Positioning days of the week

Sunday	first
Monday	second
Tuesday	third
Wednesday	fourth
Thursday	fifth
Friday	sixth
Saturday	seventh

Activity

1. What is the second day of the week?
2. What is the seventh day of the week?
3. ____ is the fourth day of the week.
4. If today is Monday, tomorrow will be ____
5. Which day comes after Friday?

Months of the year

There are 12 months in a year.

Month	Days
January	31 days
February	28/29 days
March	31 days
April	30 days
May	31 days
June	30 days
July	31 days
August	31 days
September	30 days
October	31 days
November	30 days
December	31 days

Activity

1. What is the first month of the year?
2. Which is the last month of the year?
3. Which month has 28/29 days?
4. Which month comes before June?
5. Write in full.
 - a) Jan.
 - b) Oct.
 - c) Dec.
 - d) Nov.
 - e) Sept.

LENGTH

Length is the distance between two points.

The basic unit for measuring length is metres (m)

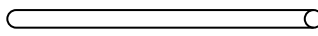
Things used to measure length

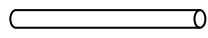
- Ruler
- Tape measure
- Handspans
- Armspans
- Strides
- A stick

Things measured in length

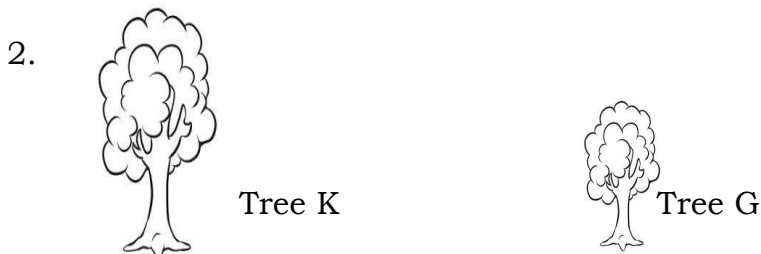
- Desk
- Paper
- Rope
- Books
- Doors
- Strings
- Books
- Walls

Comparing length of different objects

 Stick R

 Stick Z

- 1a) Which stick is longer?
b) Which stick is shorter?



- a) Which tree is taller?
b) Which tree is shorter?

Addition of length in centimetres (cm) and metres (m)

Add these numbers below

a) 6 metres + 3 metres =

b) 2 metres + 2 metres =

c)

4 m	6 m	20 m	8 m
+ 7 m	+ 3 m	+ 10 m	+ 2 m
<hr/>	<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>	<hr/>

d)

m	m	m	m
7	3	100	30
+ 8	+ 4	+ 300	+ 10
<hr/>	<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>	<hr/>

e)

15 cm	55 cm
+ 24 cm	+ 32 cm
<hr/>	<hr/>
<hr/>	<hr/>

Word problems involving addition of length

Addition in cm , km , m

Examples

1. John walked 5km on Monday. He also walked 3 km on Tuesday. What distance did he move altogether?

$$\begin{array}{r} 5 \text{ km} \\ + 3 \text{ km} \\ \hline 8 \text{ km} \end{array}$$

2. Mary's dress is 4 metres long. Annet's dress is 3 metres long. How long are the two dresses?

$$\begin{array}{r} 4 \text{ metres} \\ + 3 \text{ metres} \\ \hline 7 \text{ metres} \end{array}$$

Subtraction of length in cm and m

Subtract / take away

$$5 \text{ m} - 4 \text{ m} = 1 \text{ m}$$

Activity

$$\begin{array}{r} 8 \text{ m} \\ - 3 \text{ m} \\ \hline \hline \end{array}$$

$$\begin{array}{r} 6 \text{ cm} \\ - 4 \text{ cm} \\ \hline \hline \end{array}$$

$$\begin{array}{r} 14 \text{ m} \\ - 4 \text{ m} \\ \hline \hline \end{array}$$

$$\begin{array}{r} 70 \text{ cm} \\ - 30 \text{ cm} \\ \hline \hline \end{array}$$

Word problems involving subtraction of length

1. Teacher had 16m of a cloth. She cut 6m of it. How long was the cloth that remained?
2. Tom had a sugarcane of 4m long. She ate 2m of it. How long was the sugarcane?
3. What is 7m and 4m less?
4. George had a pole of 7m long. He cut 5m from it. How long was the remaining pole?

MK Mathematics pupils Bk.3 Pg. 150

WEIGHT

Weight is the heaviness or lightness of something.

The standard unit is grammes / grams gm/g

Weight is measured in kilograms (kg)

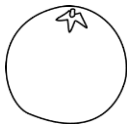
Things used to measure weight

- Sea saw
- Beam balance
- Spring balance
- A set of scale balance

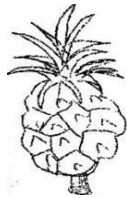
Things we can measure

- Sugar
- Beans
- Rice
- Millet
- Posho e.t.c

Comparing weight using heavier and lighter



an orange



a pineapple

1. Which of the above is lighter?
2. Which of the above is heavier?

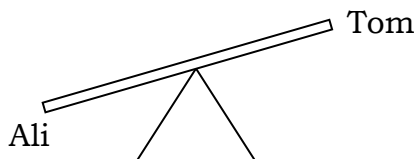


a cup

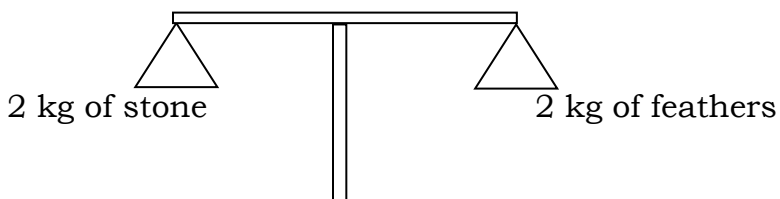


a pencil

1. Which object is lighter?
2. Which object is heavier?



1. Who is lighter?
2. Who is heavier?



Which object is lighter?

Addition of weight in kg and g

- 1) $4\text{kg} + 3\text{kg} = \underline{\hspace{2cm}} \text{ kg}$
- 2) $2\text{kg} + 1\text{kg} = \underline{\hspace{2cm}} \text{ kg}$
- 3) $10\text{kg} + 2\text{kg} = \underline{\hspace{2cm}} \text{ kg}$
- 4) $4\text{g} + 3\text{g} = \underline{\hspace{2cm}} \text{ g}$

$$\begin{array}{r} 40\text{kg} \\ + 20\text{kg} \\ \hline \end{array}$$

$$\begin{array}{r} 4\text{kg} \\ + 2\text{kg} \\ \hline \end{array}$$

$$\begin{array}{r} 80\text{kg} \\ + 40\text{kg} \\ \hline \end{array}$$

Word problems involving addition of weight

1. 6kg plus 1kg equals
2. Daddy has 5kg of beans. Mummy has 3kg of beans. How many kg do they have altogether?
3. 8kg plus 2kg equals
4. Julius weighs 2kg. Tom weighs 5kg. How much weight do they have altogether?

Subtraction of weight in kg/g

1. 4kg - 3kg =
2. 9kg - 7kg =

3.	8kg	35kg	400g	64kg
	- 3kg	- 14kg	- 100g	- 21kg
	_____	_____	_____	_____

Word problems involving subtraction of weight in kg and g

1. 5kg minus 2kg equals
2. 12kg take away 3kg equals
3. 8g minus 4g gives
4. 16kg take away 6kg equals

CAPACITY

Capacity is the amount of liquid a container can hold.

Capacity is measured in litres (L), Centimeters (CM), Milimetres (MM) e.t.c

Examples of liquids (things measured in litres)

- Water
- Juice
- Paraffin
- Soda
- Milk
- E.t.c

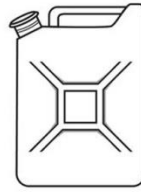
Things used to measure liquids

- Jerrycans
- Tanks
- Bottles
- Cups
- Glasses
- Bucket
- Basin

Comparing capacity of different containers

1.

a cup

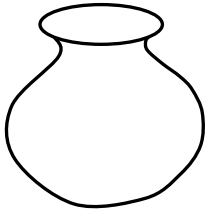


a jerrycan

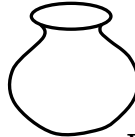
a) Which container holds more liquid

b) Which container holds less liquid

2.



Pot W



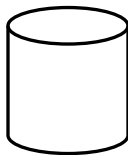
Pot R

a) Which pot holds more liquids?

b) Which pot holds less liquid?

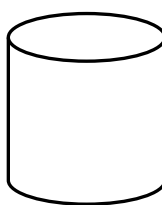
3.

Tin X



5 litres

Tin M



10 litres

Tin Z



2 litres

a) Which tin holds 5 litres?

b) How many litres can tin Z hold?

c) Which container/tin holds 10 litres?

Addition of capacity in litres (horizontally)

a) $3L + 4L = \underline{\quad}$ litres

b) $1L + 3L = \underline{\quad}$

c)
$$\begin{array}{r} 2 \quad 4L \\ + 2 \quad 4L \\ \hline \end{array}$$

d)
$$\begin{array}{r} 4 \quad 0L \\ + 1 \quad 0L \\ \hline \end{array}$$

Word problems involving addition of capacity in litres

1. Five litres four litres equals

2. Eight litres plus one litre equals

3. Three litres plus two litres gives

4. Jonah had 6 litres of water. He fetched more 3 litres of water. How many litres does he have altogether?

5.



4 litres



1 litre

How many litres are in both cups?

Subtraction of capacity in litres

a) $4\text{L} - 2\text{L} = \underline{\hspace{2cm}} \text{L}$

b)
$$\begin{array}{r} 8 \text{ litres} \\ - 3 \text{ litres} \\ \hline \end{array}$$

c)
$$\begin{array}{r} 25 \text{ litres} \\ - 5 \text{ litres} \\ \hline \end{array}$$

d)
$$\begin{array}{r} 47 \text{ L} \\ - 12 \text{ L} \\ \hline \end{array}$$

e) $10 \text{ litres} - 6 \text{ litres} = \underline{\hspace{2cm}} \text{ litres}$

Word problems involving subtraction of capacity in litres

1. Ten litres minus six litres equals
2. Mummy had 3 litres of juice. She drank 3 litres. How many litres of juice were left?
3. Mary had 8 litres of cooking oil. She used five litres. How many litres of cooking oil remained?

ALGEBRA

Finding missing numbers in addition

Examples

a) $4 + \square = 5$

b) $\square + 6 = 10$

Word problems

\square plus five equals eight

Find missing numbers in subtraction

$6 - \square = 2$

$\square - 3 = 7$

Word problems involving finding missing numbers in subtraction.

Seven take away \square equals three

\square minus two equals six