



KAUTHAR KIDS KINDERGARTEN AND PRIMARY SCHOOL-KAWEMPE:



TOPICS OUTLINE FOR MATHEMATICS PRIMARY FOUR TERM TWO 2022:

ABRIDGED FORMAT:

- 1. Number pattern and sequences**
- 2. Fractions.**
- 3. Lines, angles and geometric figures**
- 4. Data handling.**

Number pattern and sequences: (6 periods)

- **Patterns with different shapes**
- **Completing patterns and sequences from given examples**
- **Form types of numbers i.e. Odd and Even numbers**
- **Form patterns and sequences using Odd and Even numbers.**

Fractions: (18 periods)

- **Equivalent fractions.**
- **Naming/signing proper, improper and mixed fractions.**
- **Order and comparing fractions using diagrams and number line.**
- **Adding fractions with the same denominator.**
- **Subtracting fractions with the same denominator.**
- **Solving simple word problems involving fractions.**

Lines, angles and geometric figures: (15 periods)

- **Drawing line segment**
- **Recognizing right angles.**
- **Drawing right angles.**
- **Build polygons using straws, sticks.**
- **Drawing polygons and name them.**

Data handling: (14 Periods)

- **Drawing picture and bar graphs.**
- **Interpretation of picture and bar graphs**
- **Organize and display data using tables**
- **Tally marks.**
- **Grouped data and ungrouped data.**

ABRIDGED LESSON NOTES TERM TWO 2022, PRIMARY FOUR

TOPIC 1: NUMBER PATTERNS AND SEQUENCES:

SUB-TOPIC: TYPES OF NUMBERS

LESSON 1

CONTENT: Even and odd numbers Even numbers if divided by two give us 0 (zero) as a remainder.

Examples: 0, 2, 4, 6, and 8.....etc.

Note: Any number ending with 0, 2, 4, 6, and 8 is an even number.

Odd numbers are numbers if divided by two leave us with 1 as a remainder.

Example 1, 3, 5, 7, 9.....etc.

Note: All numbers that have their last digit as 1, 3, 5, 7, and 9 are odd numbers.

ACTIVITY: *New MK Primary Mathematics book four page 59.*

LESSON 2

SUB TOPIC: MORE ABOUT EVEN AND ODD NUMBERS.

CONTENT: Counting even and odd numbers in a given set of instruction.

Examples:

(i) How many even numbers are there between 10 and 20?

Solution:

List of even numbers from 0 to 20 = {0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20}

Even numbers between 10 and 20 = {12, 14, 16, 18}

Therefore, Even numbers between 10 and 20 are 4 even numbers.

(ii) How many odd numbers are there between 0 – 10

Solution:

List of Odd numbers from 1 to 11 = {(1, 3, 5, 7, 9), 11}

{1, 3, 5, 7, 9} There are 5 odd numbers.

ACTIVITY:

Exercise 4c and 4d page 60 New MK Primary Mathematics book 4.

LESSON 3

SUB-TOPIC: MORE ABOUT EVEN NUMBERS.

Finding the sum, difference and product of even numbers.

Examples:

1. What is the sum of the first 4 even numbers.

Solution

First 4 even numbers = {0, 2, 4, 6}

Sum = 0 + 2 + 4 + 6

Sum = 12

2. What is the difference between the second and fourth even numbers?

Solution

{0, 2nd , 4, 6th }

Difference = 6 - 2

Difference = 4

3. What is the product of the first and fifth even numbers?

Solution

{0, 2, 4, 6, 8}

Product = 0×8

Product = 0

4. List the even numbers between 20 and 40

ACTIVITY: Mk Primary Mathematics book 4 page 60 Exercise 4c

LESSON 4

SUBTOPIC: MORE ABOUT ODD NUMBERS.

Finding the sum, difference and product of odd numbers

Examples: (i) List down all odd numbers less than 10.

Solution

Odd numbers less than 10 = {1, 3, 7}

(ii) What is the sum of odd numbers less than 8

Solution

Odd numbers less than 8 = {1, 3, 7}

Sum = $1 + 3 + 7$

Sum = 11

(iii) What is the product of the 3rd and 4th odd number?

Solution

Odd numbers = {1, 3, 5, 7, 9, 11, 13, 15}

Product = 5×7

Product = 35

ACTIVITY: Exercise 4d. MK primary mathematics book 4 New edition

LESSON 5

SUBTOPIC: COUNTING AND WHOLE NUMBERS DEFINITION:

Counting numbers are numbers we use to count. They begin with one.
Counting numbers are also called Natural numbers

Examples:

1, 2, 3, 4, 5, 6, 7, 8, 9.....etc.

Whole numbers are numbers that begin with Zero to infinity.

i.e. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

Example 2:

Write the missing numbers 0, 1, 2, 3, 4, 5, __, __, __, __, __, __

ACTIVITY:

Exercise 4e New MK Primary Mathematics book four page 62

LESSON 6

TOPIC: NUMBER PATTERNS AND SEQUENCE:

SUBTOPIC: NUMBER SEQUENCE BY ADDING.

CONTENT:

Example:

Find the missing Odd numbers: (1, 3, 5, 7, 9, __, __)

Solution

Keep adding 2: $1 + 2 = 3$

$$3 + 2 = 5$$

$$5 + 2 = 7$$

$$7 + 2 = 9$$

$$9 + 2 = 11$$

$$11 + 2 = 13$$

The missing numbers are 11 and 13

Example 2:

Find the missing Even numbers: (2, 4, 6, 8, 10, __, __)

Solution

Keep adding 2:

$$\begin{array}{rcl} 2 + 2 & = & 4 \\ 4 + 2 & = & 6 \\ 6 + 2 & = & 8 \\ 8 + 2 & = & 10 \\ 10 + 2 & = & 12 \\ 12 + 2 & = & 14 \end{array}$$

The missing numbers are 12 and 14

NOTE: Every sequence has its own pattern.

ACTIVITY: 4F page 63 Mk Primary Mathematics book four (New edition).

LESSON 7

SUB TOPIC: NUMBER SEQUENCE:

CONTENT: NUMBER SEQUENCE BY SUBTRACTING:

Examples:

(i) 18, 16, 14, 12, 10, __, __

-2 -2 -2 -2 -2 -2

(ii) 20, 17, 15, 12, 10, 7, __, __

-3 -2 -3 -2 -3 -2 -3

ACTIVITY: Exercise 4e New MK Primary Mathematics book four page 62

LESSON 8

SUB TOPIC: MULTIPLES:

A multiple is a product of a given number and another whole greater than zero e.g. $4 \times 2 = 8$, and 8 is a multiple of 4. (M_4)

(i) List the first three multiples of 4

$$1 \times 4 = 4$$

$$2 \times 4 = 8$$

$$3 \times 4 = 12$$

$$4 \times 4 = 16$$

Therefore, the first three $M_4 = \{4, 8, 12\}$

(ii) List the first four multiples of 5

$$1 \times 5 = 5$$

$$2 \times 5 = 10$$

$$3 \times 5 = 15$$

$$4 \times 5 = 20$$

$$5 \times 5 = 25$$

Therefore, the first four $M_5 = \{5, 10, 15, 20\}$

ACTIVITY: Exercise 4g page 64 Mk book four New Edition.

LESSON 9

SUB TOPIC: COMMON MULTIPLES AND L.C.M

CONTENT: Finding the common multiples.

Examples:

1. Find the first four common multiples of 2 and 4.

Solution:

$$M_2 = \{2, 4, 6, 8, 10, 12, 14, 16, 18, \dots\}$$

$$M_4 = \{4, 8, 12, 16, 20, 24, \dots\}$$

Common multiples = $\{4, 8, 12, 16\}$

2. Find the L.C.M of 4 and 5 .

Solution:

$M_4 = \{4, 8, 12, 16, 20, 24, 28\}$

$M_5 = \{5, 10, 15, 20, 25, 30, \dots\}$

Common multiples = { 20 }

L.C.M = 20

ACTIVITY: Exercise 4L MK New Edition book 4 page 67.

LESSON 10

TOPIC: FRACTIONS.

SUB TOPIC: NAMING PARTS OF FRACTION AND WRITING FRACTIONS IN WORDS

CONTENT: Definition of a fraction.

1. What is a fraction? A fraction is a part of a whole.

2. Parts of a fraction

given that $1 \frac{2}{3}$ where by:

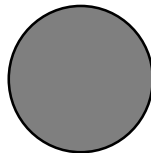
2 is the numerator

3 is the denominator

1 is the whole number

3. Names of fractions, Naming and shading fractions and writing in words.

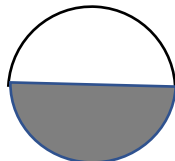
1 A whole =



or



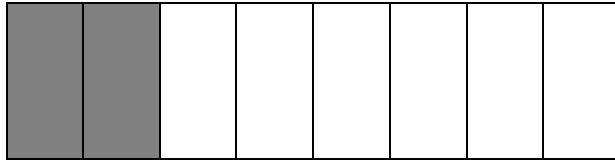
$\frac{1}{2}$ a half



or

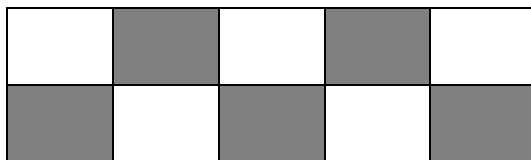


$\frac{2}{8}$ Two - eighths

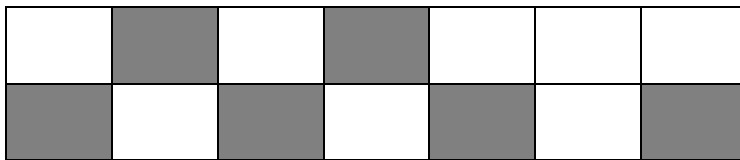


4. Shaded and unshaded fractions.

(a) Name the unshaded fraction



(b) Name the shaded fraction.



ACTIVITY: Exercise 5:1 pg. 67, a new Mk Bk 4

LESSON 11

TOPIC: FRACTIONS

SUB-TOPIC: FINDING EQUIVALENT FRACTIONS

CONTENT: How to get equivalent fractions.

- We can use the knowledge of multiples.
- We multiply each digit by whole numbers starting from 2 , 3 , 4 , 5

Examples

Find the next two equivalent fractions for each.

$$\begin{aligned} \text{a) } \quad \frac{2}{3} & \left(\frac{2 \times 2}{3 \times 2} \right) \quad \left(\frac{2 \times 3}{3 \times 3} \right) \\ & = \frac{4}{6} , \quad \frac{6}{9} \end{aligned}$$

b) $\frac{4}{5}$

c) $\frac{3}{7}$

LESSON 12

TOPIC: FRACTIONS

SUB-TOPIC: FINDING EQUIVALENT FRACTIONS USING DIAGRAMS

CONTENT: How to get equivalent fractions using diagrams.

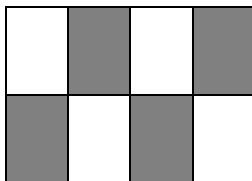
- Diagrams can be used to illustrate the equivalent fractions.
- We can use different figures but of the same value.

Examples:

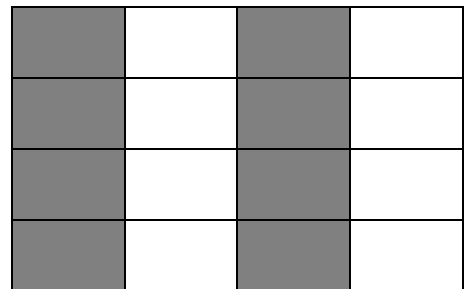
1. Describe the shaded figures using “Equivalent” or “Non-Equivalent”.

a)

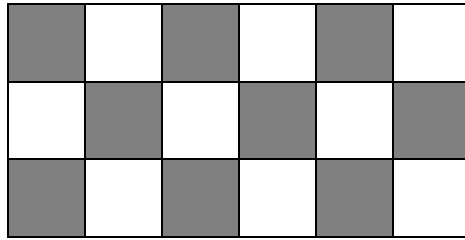
$$\frac{4}{8}$$



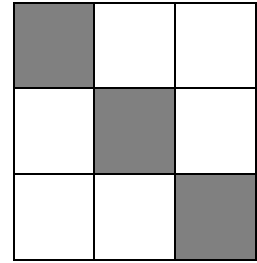
$$\frac{8}{16}$$



b) $\frac{9}{18}$



$\frac{3}{9}$



LESSON 13 & 14

TOPIC: FRACTIONS

SUB-TOPIC: ORDERING FRACTIONS

CONTENT: How to order / arrange fractions without a number line.

Examples:

1. Arrange, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$ starting from the biggest.

A fraction with the biggest numerator is the biggest after multiplying.

Solution

$$\left(\frac{1 \times 2}{3 \times 2}\right) \left(\frac{1 \times 3}{3 \times 3}\right) \left(\frac{1 \times 4}{3 \times 4}\right) \left(\frac{1 \times 5}{3 \times 5}\right) \left(\frac{1 \times 6}{3 \times 6}\right)$$

$$\frac{2}{6}, \quad \frac{3}{9}, \quad \frac{4}{12}, \quad \frac{5}{15}, \quad \frac{6}{18}$$

$$\left(\frac{1 \times 2}{4 \times 2}\right) \left(\frac{1 \times 3}{4 \times 3}\right) \left(\frac{1 \times 4}{4 \times 4}\right) \left(\frac{1 \times 5}{4 \times 5}\right) \left(\frac{1 \times 6}{4 \times 6}\right)$$

$$\frac{2}{8}, \quad \frac{3}{12}, \quad \frac{4}{16}, \quad \frac{5}{20}, \quad \frac{6}{24}$$

$$\left(\frac{1 \times 2}{2 \times 2}\right) \left(\frac{1 \times 3}{2 \times 3}\right) \left(\frac{1 \times 4}{2 \times 4}\right) \left(\frac{1 \times 5}{2 \times 5}\right) \left(\frac{1 \times 6}{2 \times 6}\right)$$

$$\frac{2}{4}, \quad \frac{3}{6}, \quad \frac{4}{8}, \quad \frac{5}{10}, \quad \frac{6}{12}$$

Therefore, $\frac{1}{2}, \quad \frac{1}{4}, \quad \frac{1}{3}$

LESSON 15 & 16

TOPIC: FRACTIONS

SUB-TOPIC: OPERATIONS ON FRACTIONS

CONTENT: ADDITION OF FRACTIONS WITH THE SAME DENOMINATORS.

Examples:

1. Work out: $\frac{1}{7} + \frac{3}{7}$

Solution

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

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

2. Add: $\frac{5}{12} + \frac{4}{12}$

Solution

$$\frac{5}{12} + \frac{4}{12} = \frac{5 + 4}{12}$$

$$= \frac{9}{12}$$

LESSON 17 & 18

TOPIC: FRACTIONS

SUB-TOPIC: OPERATIONS ON FRACTIONS

CONTENT: ADDITION OF FRACTIONS WITH THE SAME DENOMINATORS IN WORD PROBLEMS.

Examples:

Shaphic dug $\frac{5}{12}$ of the garden and Cyrus dug $\frac{4}{12}$ of the garden. What part of the garden was dug?

Solution

$$\begin{aligned}\frac{5}{12} + \frac{4}{12} &= \frac{5 + 4}{12} \\ &= \frac{9}{12}\end{aligned}$$

Therefore, they dug $\frac{9}{12}$ of the garden

ACTIVITY: Exercise 5h page 88

LESSON 19 & 20

TOPIC: FRACTIONS

SUB-TOPIC: OPERATIONS ON FRACTIONS

CONTENT: SUBTRACTION OF FRACTIONS WITH THE SAME DENOMINATORS.

Examples:

1. Work out: $\frac{7}{9} - \frac{3}{9}$

Solution

$$\begin{aligned}\frac{7}{9} - \frac{3}{9} &= \frac{7 - 3}{9} \\ &= \frac{4}{9}\end{aligned}$$

2. Subtract: $\frac{9}{12} - \frac{4}{12}$

Solution

$$\begin{aligned}\frac{9}{12} - \frac{4}{12} &= \frac{9 - 4}{12} \\ &= \frac{5}{12}\end{aligned}$$

ACTIVITY: Exercise 51 page 89

LESSON 21 & 22

TOPIC: FRACTIONS

SUB-TOPIC: OPERATIONS ON FRACTIONS

CONTENT: SUBTRACTION OF FRACTIONS WITH THE SAME DENOMINATORS IN WORD PROBLEMS.

Examples:

Abass had $\frac{8}{13}$ of a bread and ate $\frac{3}{13}$ of it. What fraction of the bread remained?

Solution

$$\begin{aligned}\frac{8}{13} - \frac{3}{13} &= \frac{8 - 3}{13} \\ &= \frac{5}{13}\end{aligned}$$

Therefore, $\frac{5}{13}$ of the bread remained.

ACTIVITY: Exercise 51 page 89.

LESSON: 23 & 24

TOPIC: FRACTIONS

SUB-TOPIC: OPERATIONS ON FRACTIONS

CONTENT: FRACTIONS OF A GROUP.

Examples:

1. What is $\frac{2}{3}$ of 12 cows?

Solution

= 2 of 12 cows

$$= \left(\frac{2}{3} \times 12 \right) \text{ cows}$$

= 2 x 4 cows

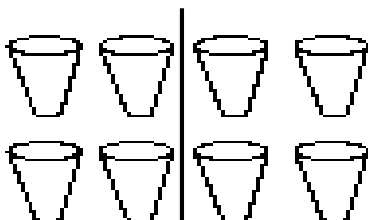
= 8 cows

Example 2

2. What is $\frac{1}{2}$ of 8 glasses?

ACTIVITY: Exercise 5q page 97. old edited MK bk 4

Solution



LESSON: 25 & 26

TOPIC: GEOMETRY

SUB-TOPIC: DRAWING LINE SEGMENTS

CONTENT: USING A RULER AND A PENCIL TO DRAW LINES.

Examples:

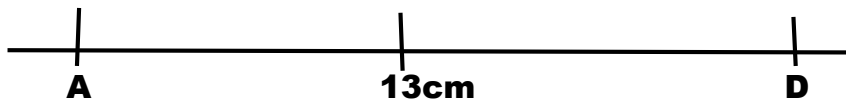
1. Use a sharp pencil and a ruler to draw and measure line segments.

i. $\overline{AD} = 13\text{cm}$

ii. $\overline{PQ} = 15\text{cm}$

iii. $\overline{XY} = 20\text{cm}$

Solution



Activity: Teachers collection.

LESSON: 27 & 28

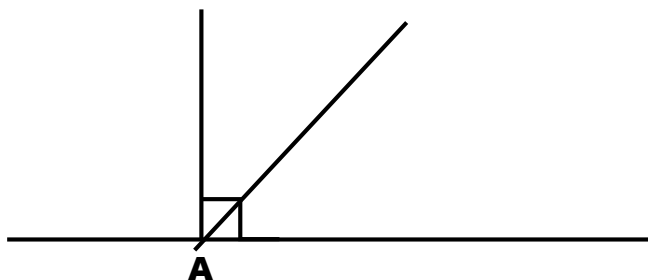
TOPIC: GEOMETRY

SUB-TOPIC: DRAWING RIGHT ANGLES.

CONTENT: USING A RULER, A SET SQUARE AND A PENCIL TO DRAW LINES.

Examples:

1. Use a sharp pencil and a ruler to draw right angles at a given point.



Activity: Pg. 98, A new Mk 2000 Bk 4

LESSON: 29 — 32

TOPIC: GEOMETRY

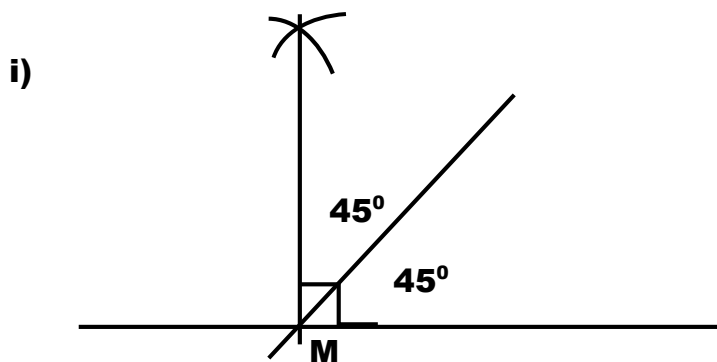
SUB-TOPIC: CONSTRUCTING RIGHT ANGLES.

CONTENT: USING A RULER, A COMPASS AND A SHARP PENCIL TO CONSTRUCT RIGHT ANGLES.

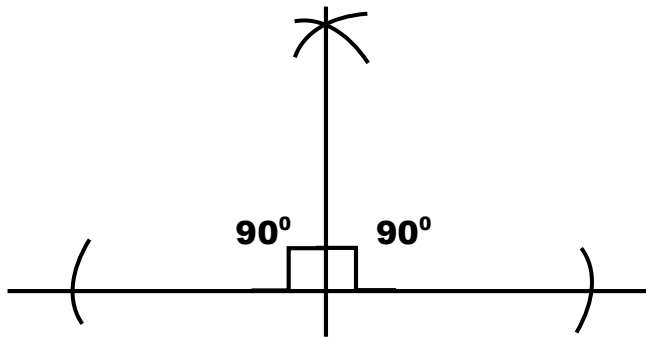
Examples:

1. Use a sharp pencil, a compass and a ruler to construct a right angle at a given point.

Solution



ii)



Activity: pg. 93 A new Mk 2000 Bk 4.

LESSON: 33 — 35

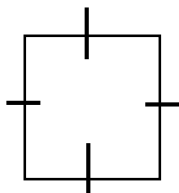
TOPIC: GEOMETRY

SUB-TOPIC: DRAWING AND NAMING GEOMETRIC FIGURES.

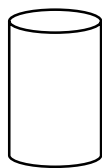
CONTENT: USING A RULER AND A SHARP PENCIL TO DRAW 2-D AND 3-D DIMENSIONAL FIGURES.

Examples:

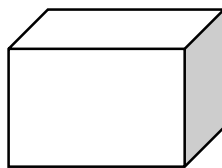
1. Use a sharp pencil and a ruler to draw these dimensional figures



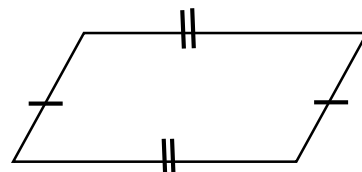
Square



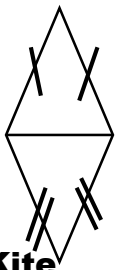
Cylinder



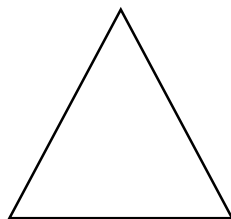
Cuboid



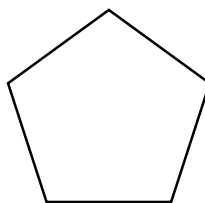
parallelogram



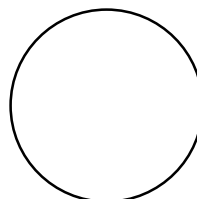
Kite



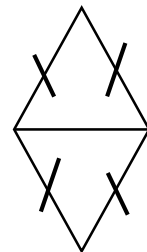
Triangle



Pentagon



Circle



Rhombus

Activity: 6:1 and 6:2 pg 90 - 91 A new Mk primary mathematics 2000 bk 4

LESSON: 36 — 37

TOPIC: GEOMETRY

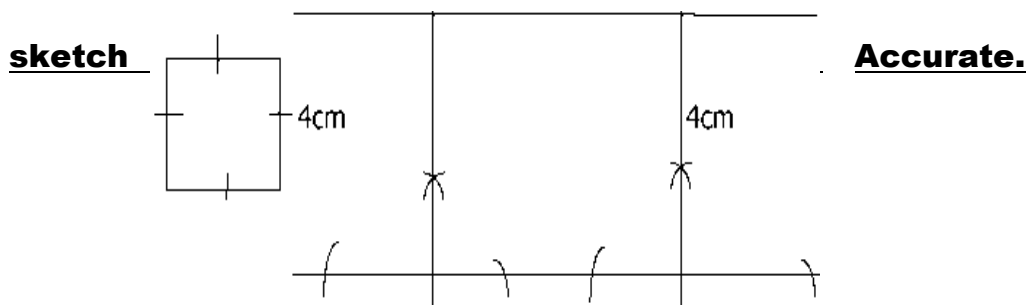
SUB-TOPIC: CONSTRUCTING A SQUARE.

CONTENT: USING A RULER, A COMPASS AND A SHARP PENCIL TO CONSTRUCT A SQUARE.

Example:

1. Construct a square of length 4cm using a sharp pencil, a ruler and a pair of compasses.

Solution



Activity: pg. 93 A new Mk 2000 Bk 4

LESSON: 38 — 39

TOPIC: GEOMETRY

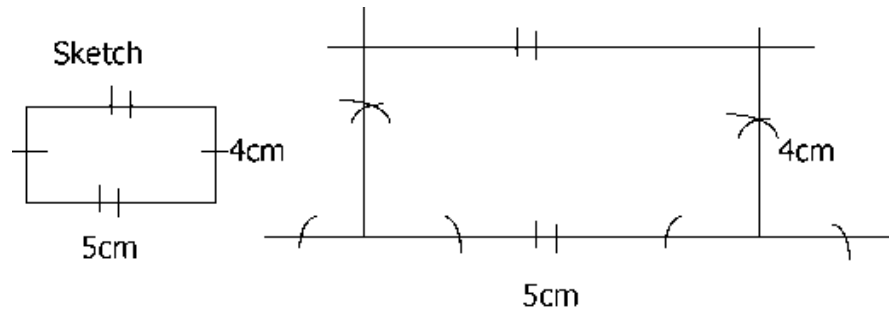
SUB-TOPIC: CONSTRUCTING A RECTANGLE.

CONTENT: USING A RULER, A COMPASS AND A SHARP PENCIL TO CONSTRUCT A RECTANGLE.

Example:

1. Construct a rectangle of length 5cm and width 4cm using a sharp pencil, a ruler and a pair of compasses.

Solution



Activity pg 94 new Mk 2000 bk 4

LESSON: 40 — 41

TOPIC: DATA HANDLING

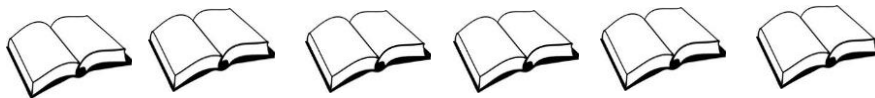
SUB-TOPIC: GRAPHS AND INTERPRETATION OF INFORMATION.

CONTENT: INTERPRETING INFORMATION ON GROUPED DATA.

Example:

1. Given that,  represents 10 books. How many books are

represented by the pictos below?



Solution:

1 picto represents 10 books
6 pictos represents (10×6) books
= 60 books

Activity: Primary mathematics pupils book 3

LESSON: 42 — 44

TOPIC: DATA HANDLING

SUB-TOPIC: GRAPHS AND INTERPRETATION OF INFORMATION.

CONTENT: INTERPRETING INFORMATION ON GROUPED DATA.

Example:

1. Given that,  represents 5 cups. Draw the pictos to represent 25 cups.

Solution

5 cups make 1 picto

25 cups make $(25 \div 5)$ pictos.
= 5 pictos

p.o.w

$$\begin{array}{r} 25 \\ \underline{5} \\ 5 \end{array}$$



Activity: Teacher's collection/ new Mk book 4.

LESSON: 45 — 48






















TOPIC: DATA HANDLING

SUB-TOPIC: GRAPHS AND INTERPRETATION OF INFORMATION.

CONTENT: INTERPRETING INFORMATION ON A TABLE.

Example:

1. The table below shows the number of apples sold by teachers of kauthar on visitation day. Use it to answer the questions that follow.

Teacher's name	Number of apples sold
Tr. Cyrus	    
Tr. Abass	      
Tr. Naume	   
Tr. Nicholas	    

Key:  represents 20 apples

Questions:

a) How many apples did each sold?

Solution

Tr. Abass = 1 picto represents 20 apples
 7 pictos represents 20×7 apples
 = 140 apples

Tr. Cyrus = 1 picto represents 20 apples
 5 pictos represents 20×5 apples
 = 100 apples

Tr. Naume = 1 picto represents 20 apples
 4 pictos represents 20×4 apples
 = 80 apples

Tr. Nicholas = 1 picto represents 20 apples
 5 pictos represents 20 x 5 apples
 = 100 apples

Activity: Teacher's collection

LESSON: 49 — 50

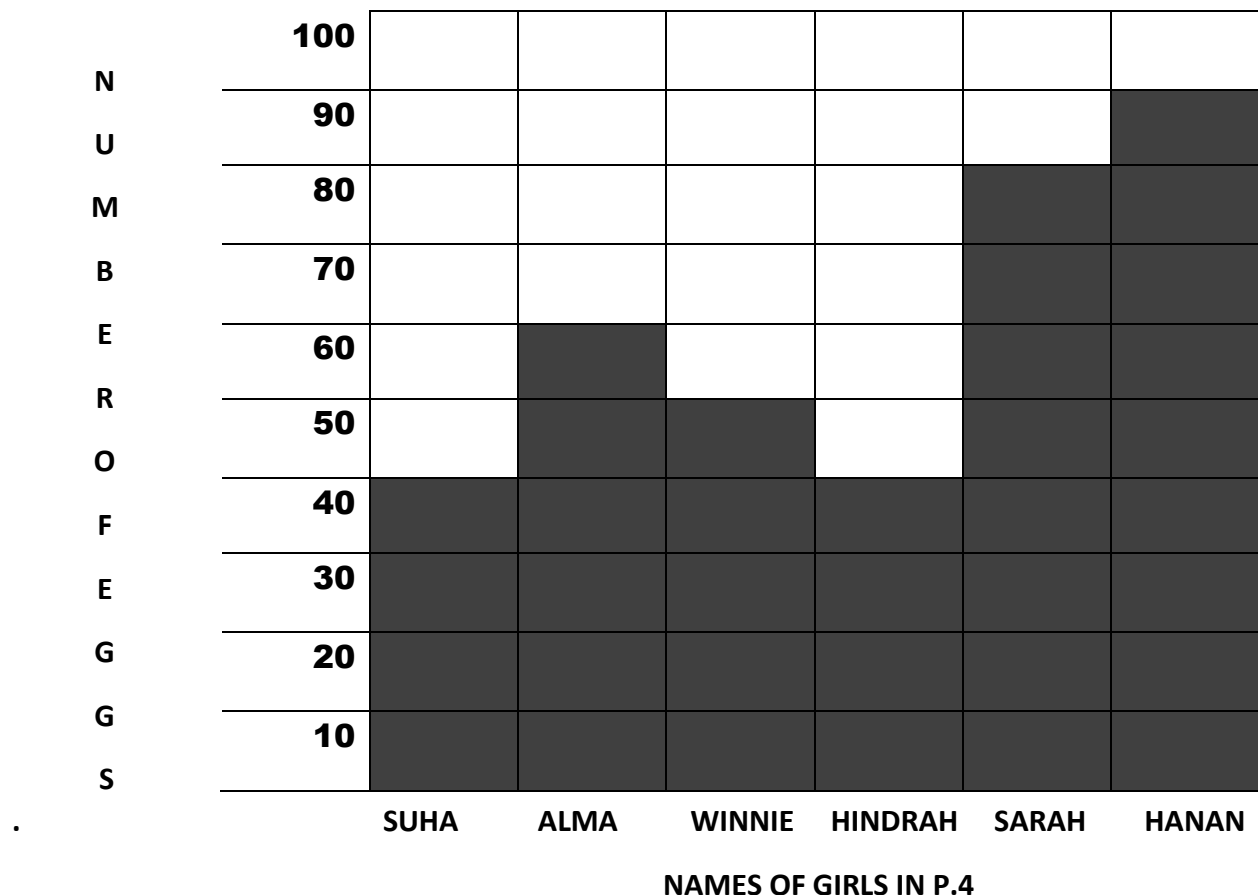
TOPIC: DATA HANDLING

SUB-TOPIC: GRAPHS AND INTERPRETATION OF INFORMATION.

CONTENT: INTERPRETING INFORMATION ON A BAR GRAPH.

Example:

1. A bar graph below shows the number of eggs sold by some P.4 girls on a sports day.



Questions:

- a) Who sold the highest number of eggs?
- b) How many eggs were sold by Hanan and Alma?
- c) Who sold the same number of eggs?
- d) How many eggs were sold altogether?

Activity: Teacher's collection.

LESSON: 51 — 53

TOPIC: DATA HANDLING

SUB-TOPIC: TALLIES.

CONTENT: INTERPRETING INFORMATION USING TALLIES.

Example:

1. Draw the tallies to represent these numbers.

5 = 

7 = 

12 = 

15 = 

20 = _____

Example 2.

Complete the table correctly:

Number	Tallies
4	
21	_____
9	_____
17	_____
22	_____

Activity : Teacher's collection / New Mk mathematics book 4.

Note: **Revision work and weekly testing of learners is emphasized**

GOOG LUCK