**LESSON NOTES FOR MATHEMATICS P.4 TERM I**

**SET CONCEPTS**

**LESSON 1: REVISION OF SETS**

**CONTENT: Definition**

A set is a collection of well-defined objects.

An element is an object or a thing which belongs to a set.

Naming sets

* A set of tomatoes
* A set of bags
* A set of oranges

Counting members in a set

**Examples**

B

p q r Set B has 5 members therefore n(B) = 5 members

t s **∴n(B) = 5 members**

X = {r, s, t} set X has 3 members

Therefore n(x) = 3 members.

.

**ACTIVITY:** Exercise on page 1 Nos. 1 – 8 (MK MTC bk 4)

**LESSON 2: CONTENT:** Equivalent and non-equivalent sets.

Equivalent sets are sets with the same number of members but they are not the same

Symbol

**Example.**

M = (1, 2, 3, 4) N= (a, e, i, o)

Set M is equivalent to set N

Or M N

**Note:** Equivalent sets are also called **matching sets**.

**Non – Equivalent sets**

These are sets which do not have the same number of members.

**Symbol**

**Example**

P = {a, b, c} Q = {p, q, u, s}

Set P and Q are non – equivalent, non-matching sets.

**Activity: Exercise 1 (MK New edition) page 6.**

**LESSON 3: Types of sets**

**CONTENT: EQUAL SETS AND EQUIVALENT SETS**

**Equal sets:**

Equal sets are sets which have the same number of elements which are exactly the same.

**Examples:**

D E

a e

I o u

a u o

e i

Symbol =

Set D and E are equal sets

**Equivalent sets.**

Equivalent sets are sets with the same number of members but they are not the same.

**Examples:**

Set A = (a, b, c, d) B =(1, 2, 3, 4)

Set A and B are equivalent sets.

Symbol

**ACTIVITY**: Exercise 1G page 8 (MK New Edition)

**LESSON 4**

**CONTENT: EMPTY SETS, {}**

Empty sets are sets which do not have members or a set whose members cannot be found.

Symbol

**Examples**

1. R S

1, 5, 7

Set R is an empty set.

(b) A set of goats with 5 legs each is an empty set.

**ACTIVITY:** Exercise 1b and 1 C page 2 (Mk New edition)

**LESSON 5: Even and Odd sets.**

Even sets are sets whose members can all be paired

**Example:**

**P**  Set P has 4 members.

Members of set P have all been paired, therefore it is an even sets.

**Note:** An empty set is an even set.

**Odd sets**

Odd sets are sets whose members can not all be paired.

**Example:**

**U**  Not all members of set U have been paired. Therefore it is an odd set.

**ACTIVITY:** Exercise 1(d) and 1 (e) page 3 and 4 (New Edition of MK)

**LESSON 6 : INTERSECTION OF SETS.**

**CONTENT: Symbol for intersection** ∩

Intersection sets have common members of two sets

**Examples:**

**P** = (a, b, c, d, e) **q** = (a, e, i, o ,u)

Find (i) P ∩ Q. = (a, e)

n (P ∩ Q) = 2

**Note:** Sets without common members are non – intersecting sets.

**Examples**

W = (1, 2, 3, 4) N = (a, b, c)

Set W and N are non – intersecting sets.

**Drawing Venn diagrams and shading the intersection.**

**Example:-**

**- Shading the intersection set.**

**A B**

A ∩ B is shaded.

**ACTIVITY**:

Exercise 1H page 10 (MK New edition) or Exercise 7 page 10 (Oxford Primary MTC Bk 4)

**LESSON 7: Listing members in the intersection**

**Example: Find the elements in the intersection set in the sets below**

**Set U Set V**

0, 1, 2

3, 4, 5

1, 3

5, 7, 9

**1.**

**U V**

0 2 1 7

4 3 5 9 ∴ U ∩ V = {1, 3, 5}

2. Set D = {p, q, r, s, t }

Set E = {f, g, r, p }

∴ D ∩ E = {p, r}

Number of elements in the intersection

**Examples:**

Set S = ( g, o, a, t ) T = ( r, o, t)

S ∩ T = (o, t) Therefore; number of elements in the intersection set are 2.

n(S∩T) = 2 elements

Set

X Y

l, o, a, f

b, l, u, f

X Y

b, u

l, f

o, a

X ∩Y = (l, f)

∴ n(X ∩Y) = 2

**LESSON 8: UNION OF SETS AND INTERSECTION**

A Union set is a collection of all the members in the given sets.

Symbol; U

Listing of members in union sets.

**Examples**

If P = (a, e, i, o, u) Q = (a, b, c, d, e)

What is P U Q?

P ∪ Q = (a, e, i, o, u, b, c, d)

**N.B**: All common members are written once.

Drawing Venn diagrams and shading.

**Examples:**

G H

Shade G ∪ H

G H Listing members of the union set

**Example:**

G H

f, e, e, t ,h

f, i, s, h

G H

f e

I s e

h f

G ∪ H = (i, s, f, h, e, e, t)

∴ Number of elements in the union set are 7

**n(G∪H) = 7 elements.**

**LESSON 9: DIFFERENCE OF SETS**

**Example:**

Set A = ( 1, 2, 3, 4, 5)

B = ( 0, 2, 4, 6, 8)

**Note:** Members of a given set only is got without common members.

Find members of

1. Set A only = {1, 3, 5}
2. Set B only = {0, 6, 8}

Members of set A only is represented by A – B

Members of set B only is shown as B – A

**Showing the difference of sets on Venn diagrams.**

A ∩ B A ∪ B

**A B**

A only (A – B) B only ( B – A)

A B A B

Set A Set B

**ACTIVITY:**

Draw and shade these regions

1. A but not B
2. A ∪ B
3. Set B
4. B – A
5. A - B

**LESSON 10: Representing elements on a Venn diagram**

**Examples:**

X = (1, 2, 3, 4, 5)

Y = (0, 2, 4, 6, 8)

Represent the two sets on a Venn diagram.

**X** Y

1 3 0 6

5 2 4 8

**List members of**

X only = {1, 3, 5}

Y – X = {0, 6, 8}

X∩ Y = {2, 4}

**ACTIVITY**

Set M = {a, b, c, d, e}

N = {a, e, i, o, u}

(a) Represent the two sets on the Venn diagram below

(b) Use your Venn diagram to answer the following:-

1. M ∩ N (v) P - Q
2. M ∪ N (vi) n(Q – P)
3. n(P only) (vii) n(Q only)
4. n(Q)

**LESSON 11: SUBSETS**

**Definition**

A subset is a set of members got from a given set.

An empty set is a subset of any set

A set is a subset of itself (its called a super set).

**Symbol**

⊂

Symbol for not subset

⊄

Listing subsets

Set P = {1, 2, 3}

The subsets are:;

{ }, {1, 2, 3}, {1, 3}, {2, 3}, {1 }, {2 }, {3 }, {1, 2 },

**WHOLE NUMBERS**

**LESSON 12: Place values**

1. In words

**Example**

(i) 4 5 6 3

Ones

Hundreds

Tens

Thousands

**In figures**

(ii) 3 6 5 8 2

1

10

100

1000

10000

(iii) Representing numbers on abacus.

**Example**

**6 3 7 0**

**TH H T O**

**6 3 7 0**

MK Primary Mathematics book 4 (Old Edition) Exercise 2b page 20.

**LESSON 13**

**SUBTOPIC: VALUES OF DIGITS IN NUMBERS**

**Example: 1**

What is the value of each in the number

7 4 6 3 2

TTH TH H T O

2 x 1 = 2

3 x 10 = 30

6 x 100 = 600

4 x 1000 = 4000

7 x 10000 = 70000

**Example 2**

What is the value of 5 in the number

3 1 5 9

**TH H T O**

3 1 5 9

5 x 10 50

Expanding numbers using place values

Example:

Expand 3 7 4 6 using its place values

|  |  |  |  |
| --- | --- | --- | --- |
| TH | H | T | O |
| 3 | 7 | 4 | 6 |

1

10

100

1000

( 3 X 1000) + ( 7 X 100) + ( 4 X 10) + ( 6 X 1)

**ACTIVITY**

MK Primary Mathematics Book 4 page 24

Exercise 2f

**Expanding numbers using values**

Example

Expand 95614 using its values

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| T/TH | TH | H | T | O |
| 9 | 5 | 6 | 1 | 4 |

4 x 1 = 4

1 x 10 = 10

6 x 100 = 600

5 x 1000 = 5000

9 x 10000 = 90000

∴ 95614 = 90000 + 5000 + 600 + 10 + 4

**ACTIVITY**

MK Primary mathematics Book 4 Page 24

**LESSON 14: writing expanded numbers in short**

**Examples:**

(a) What number has been expanded to give

(7 x 1000) + ( 4 x 100) + ( 3 x 10 ) + ( 8 x 1)

7000 + 400 + 30 + 8

= 7438

(b) What number has been expanded to give

(2 x 10000) + ( 3 x 1000) + ( 2 x 10 ) + ( 1 x 1)

20000 + 3000 + 20 + 1

= 23021

**ACTIVITY**

What number has been expanded.

(i) 500 + 70 + 2

(ii) 3000 + 400 + 90 + 2

(iii) (1 x 10,000) + (6 x 100) + (8 x 10) + (3 x 1)

(iv) (7 x 1000) + (9x 100) + (4 x 1)

(v) 5000 + 70 + 8

**LESSON 15: WRITING FIGURES IN WORDS**

**CONTENT : Example:**

1. Write 4 3 2 6 in words

|  |  |  |  |
| --- | --- | --- | --- |
| TH | H | T | O |
| 4 | 3 | 2 | 6 |

Forty thousand three hundred twenty six

1. Write 65702 in words

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TTH | TH | H | T | O |
| 6 | 6 | 0 | 6 |  |

Sixty five thousand seven hundred two.

**ACTIVITY**

MK Primary Mathematics (old edition) page 21 – 22

**LESSON 16: WRITING WORDS IN FIGURES**

**Examples**

1. Write twelve thousand four hundred seventy two

|  |  |  |  |
| --- | --- | --- | --- |
| TH | H | T | O |
| 12 | 4 | 7 | 2 |

12000

400

70

+ 2

12472

2 x 1 = 2

7 x 10 = 70

4 x 100 = 400

12 x 100 = 12000

**ACTIVITY**

MK Primary Mathematics (old edition) page 22, Exercise 2e

**LESSON 17: FORMING NUMERALS FROM DIGITS**

**Example**

1. Given the digits 3, 4 and 5. State all the 3-digit numbers that can be formed

|  |  |  |
| --- | --- | --- |
| 3 | 4 | 5 |
| 345 | 435 | 534 |
| 354 | 453 | 543 |

The numbers are; 345, 354,435,453,534,543

1. Form all the 3-digit numerals that can be formed from 5, 0 and 6

|  |  |  |
| --- | --- | --- |
| 5 | 0 | 6 |
| 506 | 056 | 650 |
| 560 | 065 | 605 |

The numbers are; 506,560,650,605

Activity: Find all the 3- digit numbers that can be formed from the following

1. 6, 9 and 7
2. 2,3 and 8
3. 1,0 and 3
4. 7,0 and 8

**LESSON 18: Rounding off to the nearest tens**

**Examples**

1. Round off 92 to the nearest tens

T O

9 0

+ 0 0

9 0

1. 4 3 6

H T O

4 3 0

+ 1 0

4 4 0

Method2: Rounding off using a number-line

**LESSON 19: Round off to the nearest hundreds**

**Example:**

(a) Round off 356 to the nearest hundreds

H T O

3 5 6

+ 1 0 0

1. 0 0

1. Round off 1245 to the nearest hundreds

TH H T O

1 2 4 5

0 0 0

1 2 0 0

**Method 2: Rounding off using a number line**

**ACTIVITY:** MK Primary Mathematics Bk 5 (Old edition) page 55

**LESSON 20: ROMAN NUMERALS**

**CONTENT: Basic Roman Numerals**

**Example:**

|  |  |
| --- | --- |
| **Hindu Arabic** | **Roman Numerals** |
| 10  20  30  40  50  60  70  80  90  100 | X  XX  XXX  XL  L  LX  LXX  LXXX  XC  C |

|  |  |
| --- | --- |
| **Hindu Arabic** | **Roman Numerals** |
| 1  2  3  4  5  6  7  8  9 | I  II  III  IV  V  VI  VII  VIII  IX |

Roman numerals got by repeating 1 or x.

2 = I + I = II = 20 = 10 + 10 = XX

3 = I + I + I = III = 30 = 10 + 10 + 10 = XXX

**Roman numerals got by adding to 5**

6 = 5 + 1 7 = 5 + 2 8 = 5 + 3

6 = VI 7 = VII 8 = VIII

**Roman numerals got by adding to 5**

6 = 5 + I 7 = 5 + 2 8 = 5 + 3

6 = VI 7 = VII 8 = VIII

The roman numerals got by subtracting from 5 or from 50.

4 = 1 subtracted from 5

4 = IV

40 = 10 subtracted from 50

40 = XL

The roman numerals got by subtracting from 10 e.g. 9 = 1 subtracted from 10.

9 = IX

**LESSON 21: Changing from Hindu – Arabic numerals to Roman numerals**

**Examples:**

(a) 19 = 10 + 9 (b) 44 = 40 + 4

X + IX XL + IV

= XIX = XLIV

**Activity:** Mk Primary Mathematics (New Edition book 5 page 34.

**Changing roman numerals into Hindu Arabic numerals.**

**Example 1 Example 2**

XIV = X + IV Change XXXIX to Hindu Arabic

= 10 + 4 XXXIX = XXX + IX

30 + 9

XIV = 14 XXXIX = 39

**ACTIVITY:** MK primary mathematics book 4 (New Edition) page 34.

**LESSON 22: Word problems involving roman and Hindu Arabic numerals**

**Example:**

(a) Henry's age is 8. Write his age in roman numerals.

8 = VIII

(b) Mukiibi’s vehicle has been driven for 24 months. Write the months in roman numerals.

24 months

24 = 20 + 4

24 = XX + IV

24 = XXIV

**ACTIVITY: MK Primary mathematics bk 4 (New Edition) page 35**

**LESSON 23: Addition in Roman numerals**

**Examples**

i) IX + V (ii) 14 = 10 + 4

= 9 + 5 = X + IV

= 14 = XIV

iii) XX + VII (iv) 29 = 20 + 9

= 20 + 7 = XX + IX

= 27 = XXIX

**Subtraction of Roman numerals**

**Examples**

1. XXXVI - XXII (b) 14 = 10 + 4

=(30 + 6) - (20 + 2) = X + IV

36 – 22 = XIV

14

(c) IX - V (d) 45 = 40 + 5

= 9 - 5 XL + V

= 4 = XLIV

**ACTIVITY :**

1. XXXIV + XLV
2. XV + XXIX
3. XCII + XL
4. XXV – V
5. XXIV – XVI
6. XLIX - XII

**OPERATION ON NUMBERS**

**LESSON 24: Adding up to ten thousand**

**Examples**

1. Add: 7464 + 4425

Arrange these numbers in their place values

TH H T O

7 4 6 4

+ 4 4 2 5

11 8 8 9

1. Add: 4622 + 5043 + 6231

TH H T O

4 6 2 2

5 0 4 3

+ 6 2 3 1

15 8 9 6

**ACTIVITY :** MK Primary 4 book page 38 exercise 39 (New edition)

**LESSON 25: More addition of numbers**

**Note; in order to add, do the following first.**

* Arrange numbers in their place values
* Add by regrouping all numbers (answers) that exceed 9

**Example:**

(i) **Add:**

TH H T O

1 3 7 8

+ 5 8 9

1 9 6 7

(ii) TTH TH H T O

1 4 3 3 1

+ 2 6 5 1

1 6 9 8 2

**ACTIVITY: MK Primary mathematics (New Edition) book 4 page 39. Exercise 3b**

**LESSON 26: Addition with word problems**

**Example:**

1. Alice carried 349 books, her brother carried 578 books. How many books were carried altogether?

Alice carried = 349 books

Her brother = 578 books

Both carried = 927 books

(ii) Maria bought sugar for shs. 15,000. Soap at shs. 800 and a bunch of Matooke at shs. 3500. How much money did she spend?

Sugar shs. 15,000

Soap shs. 800

Matooke Shs 3500

Total Expenditure sh. 19,300

**ACTIVITY: Exercise 3c (MK Primary mathematics book 4 (New Edition) pg. 40**

**LESSON 27: SUBTRACTION**

**Note; in order to subtract, you should the following**

* Arrange numbers vertically by their place values.
* Subtract impossible numbers by borrowing.

**Examples 1:**

1. 246 - 192

H T O

2 4 6

- 1 9 2

0 5 4

**Example 2.**

2. 530 - 254

H T O

5 3 0

- 2 5 4

2 7 6

**ACTIVITY: Exercise 3d (MK primary book four page 42 (New Edition)**

**LESSON 28: Subtraction of large numbers**

**Example:**

(i) 10246 - 3118

TTH TH H T O

1 0 2 4 6

- 3 1 1 8

**7 1 2 8**

(ii) 24035 - 3727

TTH TH H T O

2 4 0 3 5

- 3 7 2 7

2 **0 3 0 8**

**ACTIVITY:** Exercise 3e (MK Primary book four page 44 (New Edition)

**LESSON 29: Word problems involving subtraction**

**Example:**

What is the difference between 243 and 37?

2 4 3

- 3 7

2 0 6

(ii) Katabula had shs. 2500. He bought a book for 350. What was his change?

Katabula had - 2500

He paid - 350

His change - 2150

**ACTIVITY:** Exercise 3f (MK primary mathematics book four page 45 (Old edition)

**LESSON 30: Multiplication**

Note: Other words that call for multiplication are: product, times.

**CONTENT:** Multiplying by one digit

**Example 1:**

1. 4 3 4 6 (ii) 1 0 (iii) 4 3

x 3 x 2 x 4

13 0 3 8 2 0 1 7 2

(iv) 1 4

x 8

1 1 2

**ACTIVITY:** New Edition MK Primary Mathematics bk 4 page 46

**LESSON 31: Word problems involving multiplication by one digit.**

**Example:**

1. Juma is paid shs. 6960 a day. How much will he get if he works for 7 days.

**Solution:**

1 day he gets shs. 6960

7 days he gets 6 9 6 0

**∴ He gets 48, 720 in 7 days.**

x 7

Shs. 4 8 7 2 0

**ACTIVITY:** Exercise 3g No. 1 – 3 page 46 and 3h 1 – 5 page 47 (MK New Edition)

**LESSON 32: Multiplication as repeated addition**

**CONTENT:**

Example:

(a) 4 x 2 = 2 + 2 + 2 + 2

= 8

(b) 3 + 3 + 3 + 3 = 4 x 3

= 12

**ACTIVITY:** Use repeated addition to multiply the following:-

1. 3 x 2

**Complete**

1. 2 + 2 + 2 + 2 = \_\_\_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_
2. 4 + 4 + 4 + 4 =\_\_\_\_\_\_\_\_\_\_\_\_x \_\_\_\_\_\_\_\_
3. 3 + 3 + 3 + 3 + 3 \_\_\_\_\_\_\_\_\_\_x \_\_\_\_\_\_\_\_
4. 8 + 8 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_
5. 9 + 9 + 9 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_
6. 6 x 4
7. 4 x 3
8. 5 x 3
9. 8 x 2

**LESSON 33: DIVISION**

**CONTENT : DIVISION AS REPEATED SUBTRACTION**

Example

1. 12 ÷ 3 = 12 – 3 = 9

9 - 3 = 6 count the number of times you subtract 3 division from the

6 - 3 = 3 dividend until you get “o” is the answer

3 - 3 = 0 ∴12 ÷3 = 4 times

**ACTIVITY :** Exercise 3l page 53 (MK New Edition)

**LESSON 34: Division without reminders**

**CONTENT:**

Example 1: Divide 4804 by 4.

1201

Example 2: 124 ÷ 4

√1 2 4

3 x 4 = 1 2

4

1 x 4 = 4

31

√4 8 0 4

1 x 4 = 4

0 8

2 x 4 = 0 8

0

0

4

1 x 4 = 4

**ACTIVITY:** Exercise 3m page 53 (Mk New Edition).

**LESSON 35: word problems involving division without remainders**

**CONTENT : Examples**

1. There are 120 oranges in 2 bags. How many oranges are in each bag?

**Divide**

**Example 2**

Divide 246 text books among 3 classes

√2 4 6

0 x 3 = 0

2 4

8 x 3 = 2 4

6

2 x 3 = 6

Each gets 82 books.

Example 1:

060

082

2

√1 2 0

3

0 x 2 = 0

1 2

6 x 2 = 1 2

0

0 x 2 = 0

Each bag has 60 oranges

**ACTIVITY:** Exercise 3p (New Edition) MK Primary Mathematics book 4 page 55

**LESSON 36: Division with remainders**

**CONTENT:** Examples

Example : Divide 38148 by 5.

**ACTIVITY:**

Divide the following:-

1. 1516 by 5 =
2. 2425 by 3 =
3. 1212 by 5 =
4. 135 by 2 =
5. 215 by 4 =
6. 1212 by 7 =

07629

5

√3 8 1 4 8

1 x 3 = 0

3 8

2 x 4 = 0 8

3 8

7 x 5 = 3 5

31

6 x 5 = 3 0

1 4

2 x 5 = 1 0

4 8

9 x 5 = 4 5 3

∴ 38148 ÷ 5 = 7629 rem 3

**LESSON 37: Division by 10**

Example:

(i) 650 ÷ 10 (ii) 420 ÷ 10

=  = 

∴ 650 ÷ 10 = 65. ∴ 420 ÷ 10 = 42.

**ACTIVITY : Divide the following by 10**

(v) 640 ÷ 10 =

(vi) 280 ÷ 10 =

(vii) 480 ÷ 10 =

(viii) 560 ÷ 10 =

(i) 200 ÷ 10 =

(ii) 370 ÷ 10 =

(iii) 810 ÷ 10 =

(iv) 340 ÷ 10 =

**LESSON 38: Average**

**Content:** Finding average or mean of numbers

Examples

(i) Find the average of 0, 2 and 4

Average = Total = 0 + 2 + 4 6 = 2

Number of items 3 3

(ii) Find the average age of three girls one of 8 years, another of 10 years and the third girl of 9 years.

Total age = 8 years + 9 years = 27 years.

Average = Total age = (8 + 9 + 10 )years

No. of children 3

=  = 9 years

**ACTIVITY:** A new MK primary mathematics book 5 page 76 – 77

**LESSON 39: MONEY**

**CONTENT : Recognition of money**

|  |  |
| --- | --- |
| **COINS** | **BANK NOTES** |
| 50 /= | 1000/= |
| 100/= | 2,000/= |
| 200/= | 5,000/= |
| 500/= | 10,000/=, 50,000/= |

ACTIVITY : Exercise 8a page MK bk 4 page 148.

**LESSON 40: Addition of money**

CONTENT : Example: A man had 4800/= and he was given sh. 1200 by his

friend. How much money did he have altogether?

Sh. 4800

+ Sh. 1200

Sh. 6000

A man had sh. 6000 altogether.

ACTIVITY: Exercise 8b page 149 MK 4

**LESSON 41: Subtraction of money**

CONTENT : Example: How much change will you get from a one thousand

shilling note if you spend sh. 350?

You had sh. 1000

You spent sh. 350

Sh. 650

ACTIVITY: Exercise 8c page 150 of MK bk4

**LESSON 42: Multiplication of money**

CONTENT : The cost of 1 loaf of bread is sh. 1800. Find the cost of 3 loaves.

Shs 1800

X 3

Sh. 5400

ACTIVITY: Exercise 8d page 151 of MK bk4

**LESSON 43: Buying and selling (Shopping Bills) (Price list)**

CONTENT : Example

|  |  |
| --- | --- |
| Item | Price in shillings |
| 1 bar of soap | 1000/= |
| 1 kg of sugar | 1800/= |
| 1 kg of maize flour | 1200/= |
| 1 packet of salt | 400/= |
| An egg | 150/= |

**Questions**

(a) Find the cost of 3 kg of sugar.

(b) If Allen bought 4kg of maize flour and 1 bar of soap. How much money did she pay?

1. Calculate the cost of buying 1 bar of soap, 1kg of sugar, 1kg of flour, 1 packet of salt.
2. Find the total expenditure if one buys all the items above.

ACTIVITY: Exercise page 152 (Mk New Edition)

**LESSON 44: Shopping Bills**

CONTENT : Example 1

Mariam went to the school canteen and bought the following items

3 chaps at 500/= each.

4 chapatti at 800/=

2 bottles of soda at 500/= each.

(a) Find her total expenditure.

(b) Find her balance if she went with 8000/=

**Working**

Chaps Chapatis Soda

500/= 800/= 500/=

x 3 x 4 x 2

1500 3200= 1000=

Total expenditure

Sh. 3200

1500

+ 1000

Sh. 5700

Balance = Sh. 8000

- 5700

Sh. 2300

ACTIVITY: Teachers collection.

**LESSON 45: Division of money**

CONTENT : Example

4 books cost 1200/=. What is the cost of one book?

4 books cost - 1200/=

300

1 book will cost -  = 300/=

ACTIVITY: Exercise 81 page 153 (Mk new Edition)

**LESSON 46: Finding profit**

CONTENT : Profit = selling price – buying price

Example: Abdul bought a shirt at sh. 800

He sold it at 1000/=. What was his profit?

Buying price Sh. 800

Selling price Sh. 1000

Profit = S.P – B.P

= Sh. 1000 – 800

= Sh. 200

ACTIVITY: Exercise 8k page 155 (Old Mk) or 8h page 156 (new Edition)

**LESSON 47: Finding Loss**

CONTENT : Example: John bought a shirt at 7200/= and sold it at 6000/=.

Calculate his loss.

Loss = B.P – S.P

= B.P = 7200/=

Loss = 7200/= – 6000/=

= 1200/=

Loss = 1200/=

ACTIVITY: Exercise 8i page 157 of MK bk 4.

**LESSON 48: Postage rates**

CONTENT : Study this table.

|  |  |  |
| --- | --- | --- |
| **Articles** | **Destination** | **Charge** |
| Letter | Uganda  East Africa  Africa  Europe  Asia  America | Sh. 150  Sh. 400  Sh. 500  Sh. 500  Sh. 500  Sh. 550 |
| Small parcels (Air) | Uganda  East Africa  Africa  Europe  Asia  America | Sh. 1200  Sh. 10,000  Sh. 11,700  Sh. 16,000  Sh. 22,500  Sh. 8,450 |

**Example:**

Joseph sends 2 letters to Kenya and 3 letters to Tanzania. How much will he pay?

2 letters to Kenya will pay shs. 400 x 2 = sh. 800

3 letters to Tanzania will pay shs. 400 x 3 = sh. 1200

Total Cost = Sh. 2000

Therefore, Joseph will pay 2000/=

**LESSON NOTES FOR MATHEMATICS P.4 TERM II**

**NUMBER PATTERNS AND SEQUENCES**

**LESSON 1: TYPES OF NUMBERS**

**CONTENT : Even and odd numbers**

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

Examples: 0, 2, 4, 6, 8

Note: Any number ending with 0, 2, 4, 6, 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

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

**ACTIVITY**: new MK Primary Mathematics book four pages 59.

**LESSON 2: More about Even and odd numbers.**

* + - Counting even and odd numbers in a given set of instruction.

**Examples:**

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

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

∴ Even numbers between 10 and 20 are 4.

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

= { 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**: **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.

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?

= {0, 2nd , 4, 6th }

Difference = 6 - 2

Difference = 4

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

5st

1st

{0, 2, 4, 6, 8}

Product = 0 x 8 = 0

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

**LESSON 4** : **More about odd numbers.**

**Finding the sum, difference and product of odd numbers**

**Examples:**

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

{1, 3, 7}

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

{1, 3, 7}

= 1 + 3 + 7

7

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

4th

3rd

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

Product = 5 x 7

= 35

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

**LESSON 5**: **Counting and whole numbers**

Definition: Counting numbers are numbers we use to count. They begin with one.

Examples:

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

**Whole numbers**

Write the missing numbers

0, 1, 2, 3, 4, 5, \_\_\_, \_\_\_, \_\_\_

These are whole numbers. They begin with Zero.

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

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

**LESSON 6: Number sequence by Adding.**

**CONTENT: Example**

(a) (1, 3, 5, 7, 9, \_\_\_, \_\_\_)

(b) (1, 2, 4, 5, 7, 8, \_\_\_\_)

Add 1 then add 2

Begin with

1 + 1 = 2

2 + 2 = 4

4 + 1 = 5

5 + 2 = 7

7 + 1 = 8

8 + 2 = 10

The missing number is 10

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

**NOTE:**  Every sequence has its own pattern

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

**LESSON 7: NUMBER SEQUENCE**

**CONTENT:** Number sequence by subtracting

**Examples:**

(i) 8, 6, 4, 2 (ii) 20, 18 15, 13,10, 8, 5

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

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

**LESSON 8: MULTIPLES**

A multiple is a product of a given number and another whole greater than zero e.g.

4 x 2 = 8, and 8 is a multiple of 4.

(i) List multiples of 4 (ii) List multiples of 5

1 x 4 = 4 1 x 5 = 5

2 x 4 = 8 2 x 5 = 10

3 x 4 = 12 3 x 5 = 15

4 x 4 = 16 4 x 5 = 20

5 x 4 = 20 5 x 5 = 25

6 x 4 = 24 6 x 5 = 30

{4, 8, 12, 20, 24, ……….} 5, 10, 15, 20, 25, 30, …..}

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

**LESSON 9: COMMON MULTIPLES AND LCM**

**CONTENT**

Examples

1. Find the first common multiples of 2 and 4

M2 = {2, 4, 6, 8, 10, 12, 14, 16, 18,…}

M4 = { 4, 8, 12, 16, 20, 24..….}

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

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

M4 = {4, 8, 12, 16, 20, 24, 28}

M5 = {5, 10, 15, 20, 25, 30, …..}

Common multiples = { 20}’

∴ L.C.M is 20

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

**LESSON 10: Counting in tens, hundreds and thousands.**

Examples:

1. Fill in the missing number 10, 20, 30, \_\_\_, \_\_\_\_, \_\_\_\_ 70

**Add 10 to get the next number**

30 + 10 = 40

40 + 10 = 50

50 + 10 = 60

10, 20, 30, 40, 50, 60 70

1. Fill in the missing numbers 100, 200, 300, \_\_\_\_, \_\_\_\_\_, \_\_\_\_ 700

**Add 100 to get the next number.**

100 + 100 = 200

200 + 100 = 300

300 + 100 = 400

400 + 100 = 500

500 + 100 = 600

600 + 100 = 700

100, 200, 300, 400, 500, 600, 700

ACTIVITY: Exercise 4m Pg. 68 New Edition MK primary Mathematics bk four.

**LESSON 11: Multiplying by 10, 100, 1000.**

**CONTENT:** In this case, we simply add the number of zero to the number.

Examples:

(i) 6 x 10 = 60

(ii) 7 x 100 = 700

1. 8 x 1000 = 8000
2. 38 x 100 = 3800

**ACTIVITY:** Exercise 4n on page 69 New Edition MK primary Mathematics book four.

**LESSON 12: Multiplying by multiples of 10**

**CONTENT:**

Example 1. Example (ii)

(i) What is 7 x 30? What is 50 x 30?

7 x 30 = ? 50 x 30 = 5 x 10 x 3 x 10

30 = 3 x 10 = 5 x 3 x 10 x 10

So 7 x 30 = 7 x 3 x 10 = 15 x 100

= 21 x 10 = 1500

= 210

ACTIVITY: Exercise 4(o) page 70 New MK book 4

**LESSON 13: Dividing by multiples of 10**

**CONTENT:** We divide by canceling

**Examples:**

(ii) Share 2100 mangoes among 70 children

2100 ÷ 70 =  = 30

Divide 6000 by 30

 = 200.

**ACTIVITY:** Exercise 4q page 71 MK primary mathematics book 4 (New Edition)

**LESSON 14: Prime and composite numbers**

**CONTENT:**

Definition: A prime number is a number which has 2 factors only: 1 and that number itself.

**Examples:**

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43 ……… etc)

Composite number is a number which has more than two factors

**Examples:**

(4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20, 21, 22, 24, 25 ….. etc)

**ACTIVITY**

1. List down the first ten prime numbers.

2. List down the first five composite numbers.

3. Find the sum of the first three prime numbers.

4. Find the difference between the sixth and the fourth composite numbers.

**LESSON 15**: **LISTING FACTORS.**

**CONTENT**: Definition

Factors are given pairs of numbers you multiply together to get a multiple/product.

**Example**

1. Which two numbers do we multiply to get 12?

**Note**: 1 is the first factor of every number and it’s a factor of itself.

F12 = 1 x 12 = 12

2 x 6 = 12

3 x 4 = 12

F12 = {1, 2, 3, 4, 6, 12}

1. List down all the factors of 16

F16 = 1 x 6 = 16

2 x 8 = 16

4 x 4 = 16

∴ F16 = {1, 2, 4, 8, 16}

ACTIVITY: Exercise 5s page 73 MK book 4 (New Edition)

**LESSON 16 : COMMON FACTORS AND G.C.F / H.C.F**

**CONTENT: COMMON FACTORS**

**Examples.**

(a) List down common factors of 4 and 6

F4 { 1, 2, 4}

F6 { 1, 2, 3, 6}

Common factors = { 1, 2}

(b) Find the Greatest Common Factors of 6 and 8

F6= { 1, 2, 3 ,6}

F8 ={ 1, 2, 4, 8}

Common factors = {1, 2,}

G.C.F of 6 and 8 is {2}

**ACTIVITY :**

1. List down common factors of

* 8 and 10
* 20 and 10
* 9 and 15

2. Find the G.C.F of

* 15 and 20
* 4 and 8
* 16 and 12

**LESSON 17 : Divisibility tests for 2, 5 and 10**

**CONTENT: DIVISIBILITY TEST FOR 2**

A number is divided by 2 if its last digit is an even number i.e 0, 2, 4, 6, 8

**Divisibility test for 5**

A number is divisible by 5 if the last digit is either 0 or 5 for example 2065 and so on.

**Divisibility test for 10**

A number is divisible by 10 if its last digit is 0 for example 30, 70, 800, 1020 etc.

**ACTIVITY**

Selected numbers from exercise 4t, 4u and 4v Mk Primary Mathematics (Old edition ) page 72 – 73

**LESSON 18 : MAGIC SQUARES**

b

c

5

a

7

d

3

1

4

Magic number = 7 + 4 + 1 = 12 Find a.

**LESSON 19**

**TOPIC : FRACTIONS**

**SUBTOPIC : Revision of fractions (lower work)**

CONTENT : Definition :

A fraction is a part of a whole.

Naming and shading fractions and writing in words.

1 a whole

 a half

 Two eights

Shade these fractions.

(a)  (b)  of 6

**ACTIVITY**: Exercise 8q page 80 - 86

**LESSON 20: Finding equivalent fractions**

CONTENT : How to get equivalent fractions.

* We can use the knowledge of multiples.

**Examples**: 

 =  x  = ,  =  x  = 

 =  x  = , ∴  = { x , , , …….}

**ACTIVITY**: List the first equivalent fractions for:

1.  (b)  (c)  (d)  (e) 

**LESSON 21: Equivalent fractions**

**CONTENT : Finding the missing part of a fraction**

Example: (a)  =   x  = 

**∴**  =   x  = 

(b)  =   x  = 

**∴**  =   x  = 

 x  = 

**ACTIVITY:** Exercise 5b MK bk 4 page 82

**LESSON 22: Reducing fractions**

**CONTENT : Reduce**  to its lowest term.

Example:

(a)  ÷  = 

 ÷  = 

∴  = 

(b) Write  to its lowest terms (By using the GCF / HCF

 ÷  = 

F3 = { 1, 3 }

F9 = { 1, 3 , 9 }

H.C.F = 3

**ACTIVITY**: Exercise 5d MK bk 4 page 84

**LESSON 23: Comparing fractions without a number line**

**CONTENT :**

**(a) Example**: Which is greater or ?

 = , , ………..

 = , , …………

∴  is greater than 

**ACTIVITY**: Exercise 5f MK bk 4 page 86

**LESSON 24: Ordering fractions**

**CONTENT : Arranging fractions starting with the largest.**

**Example 1**

1. , , 

 =  =  =  =  ……………..

 =  =  =  …………………..

 =  =  …………………….

∴ , ,  starting from the biggest is , , 

**Example 2**

Arrange: , ,  starting with the smallest.

 =  =  =  =  =  =  = = = 

 =  =  =  =  =  =  = = = 

 =  =  =  =  =  = 

∴ , ,  from the smallest is , , 

ACTIVITY: Exercise 5f page 86.

**LESSON 25: Operation on fractions**

**CONTENT : Addition of fractions with the same denominators**

**Example: 1**

 +  =  = 

**Example II**

 +  =  = 

**ACTIVITY:** Exercise 5g page 87

**LESSON 26: Addition of fractions with the same denominator in word**

**problem.**

**CONTENT :** Jesca dug  of the garden and Mary dug of the garden. What

part of the garden was dug?

Jesca dug

Mary dug  so  +  =  = 

ACTIVITY: Exercise 5h page 88

**LESSON 27: Subtraction of fractions with the same denominators.**

**CONTENT :** Example 1: Example II

** -  =  =  -  =  =**

**ACTIVITY:**  Exercise 51 page 89.

**LESSON 28: Subtraction of fractions with the same denominators in**

**word problem.**

**CONTENT : Example 1:** Subtraction **** from  ****

** -  =  = **

Example 2

Andrew had **** of a cake, he ate **** of it. What fraction remained?

Andrew had **** he ate ****

**∴  -  =  = **

ACTIVITY: Exercise 51 page 89.

**LESSON 29: Addition of fractions with different denominators**

**CONTENT : Example 1**

Add: ** + **

Using equivalent fractions

** =  =  =  = ** ………………..

** =  =  = **

** +  =  = **

**ACTIVITY**: Exercise 5n page 94

**LESSON 30: Subtraction of fractions with different denominators.**

**CONTENT :** Example 1

Subtraction of ** - **

Using equivalent fractions.

** =  =  =  =** , …………….

** =  =  =  =** 

** +  =  =** 

**ACTIVITY**: Exercise 50 page 95

**LESSON 31: Mixed fractions as improper fractions**

**CONTENT :** Example 1:

 = 1 +  =  +  = 

Example II

 = 1 +  =  +  = 

ACTIVITY: Page 90 – 91 Exercise 5j

**LESSON 32: Changing improper fractions to mixed fractions.**

**CONTENT :** Example 1: Change  to a mixed fraction.

**Working 1** **Working 2**

 is  +  +   = 

- 4

1

= 1 + 1 + 

= 2 = 2

ACTIVITY: Exercise 5k page 92

**LESSON 33: Addition of mixed fractions with the same denominators.**

**CONTENT :** Add: 1 + 4 to a mixed fraction.

Re-arrange: = (1 + ) + (4 + )

= 1 + 4 +  + 

= 5 + 

= 5

ACTIVITY: Exercise 5L page 93.

**LESSON 34: Addition of fractions with the same denominators in word**

**problem.**

**CONTENT :** James bought 6kg of meat on Monday and 7kg on Tuesday.

How many kilograms did he buy altogether?

6kg + 7kg.

Rearrange = (6 + ) + (7 + )

6 + 7 +  + 

13 + 

13 + 1

= 14kg.

**ACTIVITY:** Exercise 5L page 93.

**LESSON 35: Subtraction of mixed fractions with the same denominators**

**CONTENT :** Subtract 4 - 2.

Re-arrange = (4 + ) – (2 + )

= ( 4 – 2) + ( - )

= 2 + 

= 2

**ACTIVITY:** Exercise 5m page 93.

**LESSON 36: Fraction of a group.**

**CONTENT :** Example 1: What is  of 8?

8 glasses 2 groups shaded  of 8 = 4

**ACTIVITY:** Exercise 5q page 97.

**LESSON 37: Application of fractions**

**CONTENT :** A man had 100 cows on his farm. He gave away to his wife and

remained with the rest. How many cows did he give his wife?

20

 x 100 = 2 x 20

**=** 40 cows

Find the number of cows his remained with

100 - 40 = 60 cows.

Find the fraction that he remained with;

1 -  =  -  = 

= 

**ACTIVITY :** Exercise 5s page 138 book 5

**LESSON 38: Multiplication of fractions**

**CONTENT : Multiply: ⇒**  x  =  ⇒  x  = 

**⇒**  of  ⇒  of 

**⇒**  x  =  ⇒  x  = 

**ACTIVITY :** Exercise 5r page 137 - 138 book 5

**LESSON 39: Reciprocals of given fractions**

**CONTENT :** (i)The reciprocalof  is 2

Example (ii) Find the reciprocal of .

Let the reciprocal be m

m x  = 1

3 x m = 1 x 3

2m = 3

m = 

**NOTE:** The product of a number and its reciprocal is 1

**ACTIVITY**: Exercise 5u page 141 book 5

**LESSON 40: Writing decimal fractions in words.**

**CONTENT :** Example 1

Write 0.2 in words

0.2

Tenth

0.2 is either two tenths

Or zero point two

ACTIVITY: Exercise 5r page 99.

**LESSON 41: Writing fractions in decimals**

**CONTENT :** Example 1

 = ones Tenth

0 4 = 0.4

Example II

 (Thirty six hundredths)

ones Tenth Hundredth

0 4 6 = 0.36

Example III

 (Seventeen hundredths)

ones Tenth Hundredth

0 1 7 = 0.17

ACTIVITY: Exercise 5s page 99

**LESSON 42: Expressing decimal as common fractions**

**CONTENT :** Examples:

(a) Change 0.3 into a common fraction.

* 1. = 

(b) 0. 4 = 

ACTIVITY : Exercise 5U page 100 MK Bk. 4

**LESSON 43: Place values and values of decimals**

**CONTENT :** Examples

1. What is the place value of 3 in 0.04

0 . 0 4

Hundredths

Tenths

Ones

ACTIVITY: MK pupils book 4 page 100.

**LESSON 44: Addition of decimal fractions (abacus method)**

**CONTENT :** Examples: 2.3 + 3.8 Example II: Add: 2 + 0.7

2 . 3 2

3 . 8 + 0 . 7

6 . 1 2 .7

ACTIVITY: MK Primary mathematics (New Edition) pg. 103 exercise 5y

**LESSON 45: Addition of decimal fractions using a number line.**

**CONTENT :** Add: 0.2 + 0.3

Example:

0.3

0.2

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0

ACTIVITY: Exercise: 5x page 102 MK Bk. 4 Page 102

**LESSON 46: Addition of decimal fractions using the abacus.**

Examples: Add: 1.3 + 2.6

Ones Tenths Ones Tenths Ones Tenths

+ =

**1 . 3 2 . 6**

**3 . 9**

OR:

1 . 3

+ 2 . 9

3 . 9

ACTIVITY: Exercise 5y MK Bk 4 Page 103

**LESSON 47: Word problems involving addition of fractions (decimals)**

**CONTENT :** Examples:

(i) I ate 0.2 of a cake in morning and 0.7 of it in the evening. What decimal fraction did I eat altogether?

Morning 0 . 2

Evening + 0 . 7

0 . 9 altogether.

ACTIVITY: Exercise 5z1 MK pupils Bk. 4 page 104

**LESSON 48: Subtraction of decimals.**

**CONTENT :** Examples: Subtraction: 0 . 5 – 0 . 2

0 . 5

- 0 . 2

0 . 3

ACTIVITY: Exercise 5z5 MK pupils Bk. 4 page. 108

**LESSON 49: Word problems involving subtraction of decimal**

**CONTENT :**

Example:

Aisha had 7.2m of a string. She sold 8.5m. What length of the string did she remain?

Had 7 . 2m

Sold - 3 . 5m

= 3 . 7m

ACTIVITY: Exercise 5z9 MK pupils book 4 page 111

**LESSON 50: Ordering decimal fractions**

**CONTENT :** Example 1.

Arrange 0.6, 0.2, 0.4 starting with the smallest

0.4

0.2

0.6

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7

∴ The order is 0.2, 0.4, 0.6

ACTIVITY: Exercise 5z3 Mk pupils BK. 4 Page. 107.

**LESSON 55: GEOMETRY**

**SUBTOPIC : Drawing line segment**

**CONTENT :** Drawing and measuring line segment.

Example I:

End point

5cm

Example II: Draw a line segment of 4.5cm long.

4.5cm

ACTIVITY: Class activity on page 142 MK bk. 4.

**LESSON 52: Drawing and recognizing right angles.**

**CONTENT :** Example: Using a protractor, Draw a right angle.

Right angle

ACTIVITY: Use the line segment below to draw a right angle.

**LESSON 54**

**TOPIC : 2 – DIMENSIONAL GEOMETRY**

**SUBTOPIC : Plane shapes.**

**CONTENT :** Drawing and naming plane shapes

|  |  |  |
| --- | --- | --- |
| **SHAPE** | **NAME** | **PROPERTIES** |
|  | Triangle | It has 3 sides. |
|  | Square | Has all sides equal. |

ACTIVITY: Exercise 12a MK pupils BK. 3 page 123.

**LESSON 56: Drawing and measuring angles using a protractor**

**CONTENT :** Using a ruler, pencil and a protractor, draw the following angles.

(a) (b) 450 (c) 600 (d) 300

900

ACTIVITY: Using a protractor, measure the following angles.

(a) (b) (c)

**LESSON 57: Constructing of squares and rectangles using a protractor**

**when given sides.**

**CONTENT :** Example:

3cm

5cm

4cm

ACTIVITY: Using a ruler, a pair of compasses and a pencil, construct

(a) a rectangle (b) a square.

**LESSON 51: Constructing triangles when given sides using a pair of**

**compasses only.**

**CONTENT :** Example:

Construct an equilateral triangle with sides 5cm

5cm

ACTIVITY: Using a ruler, divider, pair of compasses, construct;

1. Equilateral triangle with sides 4cm
2. Triangle with sides 6cm.

**LESSON 58: Circles (making circles)**

**CONTENT :** Circles will be drawn in different forms like using:

- Hard papers / circular objects.

- Strings

- The big toe

- A pair of compasses

ACTIVITY: Exercise will be given.

Draw a circle using

-circular object

\_ pair of compasses.

**LESSON 59: Parts of a circle. (Naming)**

**CONTENT :** Parts shown on circles

Major segment

Minor segment

B

A

•

Centre

Diameter

Radius

Circumference

•

AB is a chord because it is a straight line joining two points on a circle.

ACTIVITY: Exercise 7e page 130

**LESSON 60: Naming parts of a circle**

**CONTENT :** Parts shown.

Circular region

Circle

Semi-circle

Quadrant

More in MK bk 4 page 132

ACTIVITY: Exercise 7g page 133.

**LESSON 61: Finding the diameter when given the radius.**

**CONTENT :** Example

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Radius | 2cm | 6cm | 7cm | 9cm | 10cm | 13cm |
| Diameter | 4cm | 12cm | 14cm | 18cm | \_\_\_\_\_ | \_\_\_\_\_ |

Diameter = r + r

Diameter = r + r

= 7cm + 7cm = 14cm

= 6 + 6 = 12cm

Diameter = r + r

Diameter = r + r

= 10 + 10 = 20cm

= 9 + 9 = 18cm

ACTIVITY: Exercise given on page 131 Mk bk 4. (number 4)

**LESSON 62: Finding the radius when given the diameter.**

**CONTENT :** Example

Find the radius of a circle whose diameter is 12cm.

Radius = Diameter

2

6

=  = 6cm.

ACTIVITY: Exercise given on page 131 (numbers 2 and 3)

**LESSON 63: Polygons. (Drawing and naming)**

**CONTENT :** Examples of common polygons.

|  |  |
| --- | --- |
| **Name** | **Number of sides** |
| Triangle | 3 |
| Quadrilateral | 4 |
| Pentagon | 5 |
| Hexagon | 6 |
| Septagon / Heptagon | 7 |

ACTIVITY: Exercise on page 136 Mk bk 4

**LESSON 64: Identifying and naming 3 dimensional figures.**

**CONTENT :** Solid shapes.

|  |  |
| --- | --- |
| **Geometric solid shapes** | **Name** |
|  | Cone |
|  | Cylinder |
|  | Cuboid |
|  | Triangular Pyramid |

ACTIVITY: Exercise 7b page 126. MK bk 4

**LESSON 65: 3 DIMENSIONAL GEOMETRY**

**SUBTOPIC : Naming parts of the solid shapes**

**CONTENT :** Cube.

Vertex (corner)

6 faces

8 vertices

12 edges

Face

Edge

Cone

2 faces

1 vertex

1 edge

Vertex

Curved face

Edge

Plane surface

ACTIVITY: Exercise 7c page 127

**LESSON 66: Finding volume of a cuboid and the area of the shaded part.**

**CONTENT :** Example:

V = L x w x h

V = 5cm x 2cm x 3cm

V = 30cm3

Area of the shaded part

Area = L x w

= 3cm x 2cm

= 6cm2

5cm

2cm

3cm

ACTIVITY: Exercise will be given like:

1. Find the volume of a cuboid whose length is 10cm, width 5cm and height 2cm.

(i) Find the volume.

(ii) Find the area of the shaded part.

2.

2cm

6cm

3cm

5cm

1cm

3cm

3.

(i) Find the Area of the shaded part.

(ii) Find the volume

Refer to exercise 12a page 220 MK bk 4 (Old Edition)

**LESSON 67: Types of angles and finding the value of the unknown**

**CONTENT :** Right angles or complementary angles.

Straight angles or supplementary angles.

Finding the value of x

P + 700 = 900

P + 700 – 700 = 900 - 700

P = 900 - 700

P = 200

700

p

x + 400 = 900

x + 400 – 400 = 900 - 400

x = 900 - 400

x = 500

x

400

ACTIVITY: Exercise 7k page 139 Mk bk 4

**LESSON 68: Straight angles or supplementary angles**

**CONTENT :** Find the value of angle P.

m + 450 = 1800

m + 450 – 450 = 1800 - 450

m = 1800 - 450

m = 1350

P + 600 = 1800

P + 600 – 600 = 1800 - 600

P = 1800 - 600

P = 1200

P

600

m

450

ACTIVITY: Exercise 7p Page 142.

**LESSON 69: Straight angles of supplementary angles.**

**CONTENT :** Find the value of angle R.

m + 500 + 700 = 1800

m + 1200 = 1800 - 450

m = 1200 - 1200 – 1800 - 1200

m = 1800 - 1200

m = 600

400

700

m

500

ACTIVITY: Exercise will be given.

(i) (ii)

300

V

800

700

h

500

K

(iii) (iv)

550

850

r

600

**LESSON 72: Angle sum of a triangle**

**CONTENT :** Finding the value of angle n

n + 600 + 450 = 1800

n + 1050 = 1800

n = 1050 - 1050 – 1800 - 1050

n = 1800 - 1050

n =750

n

600

450

z + 400 + 900 = 1800

z + 1300 = 1800

z = 1300 - 1300 – 1800 - 1030

z = 1800 - 1300

z = 500

z

400

ACTIVITY: Exercise 7r page 144.

**LESSON 70: GRAPHS AND DATA INTERPRETATION**

**SUBTOPIC : Tallies**

**CONTENT :** Complete the tally marks

//// /// = 8, //// //// = 10, //// //// ///= 13, //// //// //// //// //// / = 26

//// //// = 9

Making tally marks.

17 = //// //// // 5 = ////, 12 = //// //// //

17 = //// //// //// //, 9 = //// ////

ACTIVITY: Exercise 6a page 106

**LESSON 71: Tallies**

**CONTENT :** The information below shows the number of cars of different

colours counted by pupils.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Days of the week | White | Red | Black | Maroon |
| Monday | //// | //// /// | // | /// |
| Tuesday | //// / | //// // | //// // | / |
| Wednesday | //// //// / | / | /// | //// //// |
| Thursday | //// / | /// | //// | //// //// |

1. How many cars were seen on Monday?

18 cars were seen on Monday

1. Which colour appeared most?

White colour appeared most.

ACTIVITY: Exercise 6b page 107

**LESSON 73: Pictograph**

**CONTENT :** The graph below shows the number of balls picked by four

sisters from a shop.

.

|  |  |
| --- | --- |
|  | Doreen |
|  | Diana |
|  | Daphine |
|  | Daizy |



Scale. = 5 balls.

1. Which two sisters picked the same number of balls?

Diana and Daizy picked the same number of balls.

1. How many balls did Doreen and Daphine pick?

Doreen = 30, Daphine 20

= 30 + 20 = 50

Doreen and Daphine picked 50 balls.

ACTIVITY: Exercise 6f page 111 and 112.

**LESSON 74**

**TOPIC : GRAPHS**

**SUBTOPIC : Bar graphs**

**CONTENT :** The graph below shows the daily attendance of P.4 pupils for a

week.

40

Number of pupils

35

30

25

20

15

10

5

0

Mon Tue Wed Thur Fri.

Days

(a) How many pupils were present on Thursday?

Thirty pupils were present on Thursday

(b) On which day was the biggest number of children present?

On Wednesday, there was the biggest attendance.

ACTIVITY : Activity 6g page 113 Mk bk 4

**LESSON 75**

**TOPIC : LINE GRAPHS**

**SUBTOPIC : The graph below shows the number of animals sold by**

**different people.**

Animals sold

50

40

30

20

10

0

Tom Joy Paul Jelly Peace

**Names of people**

(a) How many animals did Joy sell?

Joy sold 50 animals.

(b) Find the number of animals sold by Jelly and peace.

Jelly sold 40, Peace sold 30

40 + 30 = 70

They sold 70 animals.

**LESSON 76: Temperature graphs**

**CONTENT :** Maximum temperature was recorded during day time and

minimum temperature was recorded during night time.

TEMPERATURE 0C

400C

300C

200C

100C

00C

100C

400C

MON TUE WED THUR

Days of the week.

**KEY**

Maximum

Minimum

* What day was the hottest day of the week?

Wednesday was the hottest day.

* What was the coldest day of the week?

Tuesday was the coldest day of the week.

* On what days were the days’ maximum temperatures the same?

On Tuesday and Thursday the days maximum temperatures were the same.

ACTIVITY: Exercise 6k page 118.

**LESSON NOTES FOR MATHEMATICS P.4 TERM III 2022**

**LESSON 1**

**TIME**

**SUBTOPIC : Telling time**

CONTENT : Show the following time on a clock face.

(a) A quarter past 9 (b) 20 minutes to 11

ACTIVITY: Exercise 9a on page 162 of Mk bk 4.

**LESSON 2**

**SUBTOPIC : Changing hours to minutes**

CONTENT : Examples

(a) Change 4hrs to minutes

1 hr = 60 minutes

4 hrs = (4 x 60) minutes

240 minutes

b) How many minutes are in 3 ¼ hours?

⇒ 3¼ hrs = (3 x ¼ ) hours

1hr = 60 min

3 hrs = (3 x 60 ) minutes

180 minutes

¼ hr = 15 minutes

3¼hrs = 195 minutes

Exercise 9b page 163 of MK bk 4

**LESSON 3 : Writing the time in hours and minutes**

CONTENT : Examples: Write 70 minutes in hours and

1 hr = 60 minutes

70 min = 

70 minutes = 1 hour 10 minutes.

ACTIVITY: Exercise 9c page 163 of Mk bk 4

**LESSON 4: Word problems on changing minutes to hrs**

CONTENT : Examples: A lesson took 140 minutes

How long was that lesson in hours.

Solution: 60 minutes = 1hr

140 minutes = 

So, 140 minutes = 2 hrs 20 minutes.

ACTIVITY: Exercise 9d page 164 of MK bk 4

**LESSON 5: Addition of time**

CONTENT : Work out

(a) HRS MIN (b) HRS MIN

3 40 1 50

+ 4 30 2 15

8 10 7 35

Activity work out the following.

(a) HRS MIN (b) HRS MIN

6 20 4 45

+ 4 30 +3 35

\_\_\_ \_\_\_\_\_\_\_

**LESSON 6 : Word problems involving addition of time**

CONTENT : **Examples**:

A taxi driver took 2 hours 40 minutes to drive from Kampala to Masaka and 1 hour 45 minutes from Masaka to Kabula. What time did he take altogether travelling?

HRS MIN

2 40

+1 45

4hrs 25 min altogether

85 ÷ 60

= 1r25

ACTIVITY: Exercise 9f page 167 of Mk bk 4

**LESSON 7: Subtraction of time**

CONTENT : work out the following

(a) Hrs Min (b) Hrs Min

2

85

80

3

4 20 3 25

- 1 50 - 1 45

1 30 1hr 40min

ACTIVITY: Exercise 9g page 168 Mk bk 4

**LESSON 8: Word problems of time (Subtraction)**

**CONTENT** : Examples

Betty spent 5hours 20 minutes at school; she played for 1 hour 30 minutes. For how long did she stay in class?

Total time at school

80

4

Total time at school = 5hrs 20min

Time spent playing -1hr 30min

Time in class = 3hrs 50min

ACTIVITY: Exercise 9h page 169 of Mk bk 4

**LESSON 9: Multiplication of time**

CONTENT : Examples:

(a) Hrs Min (b) Hrs Min

2 25 7 30

x 3 x 5

7 15 37hrs 30min

ACTIVITY: Exercise 9i page 171 of MK bk 4

**LESSON 10: Division of time**

CONTENT : Divide 9hrs 30 minutes by 3

Hrs Min

3 10

3 9 30

9 30

ACTIVITY: Exercise 9j page 172 of MK bk 4

**LESSON 11: Writing time in a.m and p.m**

CONTENT : Examples

(a) Express 6 O’clock in the morning using a.m. or p.m.

1. O’clock = 6: 00a.m

(b) Express 8 O’clock in the evening in figures:

8 O’clock = 8:00p.m

ACTIVITY: Exercise 9k and 9L pages 174 and 175.

**LESSON 12: Finding duration**

CONTENT : Luyiga walked from her home at 7:15a.m and reached school at

8:15a.m. How long did it take her?

Hrs Min

Ending time = 8 : 15a.m

Starting time = 7 : 15a.m

Duration = 1hr 00min

So, she took 1 hour.

ACTIVITY: Exercise 9m page 176 of Mk bk 4

**LESSON 13: Changing days to hours**

CONTENT : Examples

How many hours are in 5 days?

1 day = 24 hours

5 days = 2 4 hrs

x 5

5 days = 120hrs

ACTIVITY: Exercise 9(o) page 177 of Mk bk 4

**LESSON: Changing hours to days**

CONTENT : Examples: How many days are in 72 hours?

Solution 24hrs make 1 day

1hr makes 

72 hrs make x 72hrs

2

72hrs = 3 hours.

ACTIVITY: Exercise: 9n page 177 of Mk bk 4.

**LESSON 15: Changing weeks to days**

CONTENT : Examples: How many days are in 8 wks?

1wk = 7days

8wks = 8 x 7 days

= 56days

ACTIVITY: Exercise 9p page 178 of MK bk 4

**LESSON 16: Changing days to weeks**

CONTENT : Examples: How many weeks are there in 63 days?

7 days make 1 week

63 days = weeks

= 9 weeks

ACTIVITY: Exercise 9q page 178 of MK bk 4

**LESSON 17: Addition of time in weeks and days**

CONTENT : (a) Wks Days

1 3

+ 2 5

4 1

8 ÷ 7 = 1r1

(b) A man took 5 weeks 5 days to make a wooden bed and 4 weeks 6 days to make a chair, How long did the man take on both?

Wks Days

5 5

+4 6

10wks 4days

11 ÷ 7 = 1r4

ACTIVITY: Exercise 9s page 180 and 181 (New edition of MK bk 4)

**LESSON 18: Subtraction of time in wks and days**

CONTENT : Example: Wks Days

9

2

3 2

- 1 5

1 4

ACTIVITY: Exercise 9t page 182 of Mk bk 4

**LESSON 19: Changing meters to centimeters**

CONTENT :

Example 2

Change 3m + 2m + 2m to cm

3m + 2m + 2m = 7m

1m = 100cm

7m = 7 x 100cm

= 700cm.

Example 1

Change 3m to centimeters.

1m = 1000cm

3m = 3 x 100cm

= 300cm.

ACTIVITY: Exercise 10a page 186

**LESSON 20: Changing centimeters to meters**

CONTENT : Examples

Example 2

Change 8000 centimeters to metres

Since 100cm = 1m

8000cm = 

= 80m

Example 1

Change 200 centimetres to metres

Since 100cm = 1m

200cm = 

= 2m

ACTIVITY: Exercise 10b page 186 MK book 4.

**LESSON 21: Addition in metres and centimeters**

CONTENT : Examples

Add: 8m 25cm

+ 6m 85cm

15m 10cm

Add: 2m 45cm

+ 6m 36cm

8m 81cm

ACTIVITY: Exercise 10d page 187 MK book 4.

**LESSON 22: Word problems in Addition of metres and centimeters** CONTENT : Example 1

Namusoke had 8m 55cm of cloth. She later bought 10m 85cm of cloth. Find the total length of cloth she has now.

M CM

Namusoke had 8 55

She later bought + 10 85

Total cloth bought 19 40

ACTIVITY: Exercise 10e page 188.

**LESSON 23: Subtraction of metres and centimetres**

CONTENT : Example 1

8

Subtract : M CM

6m 80cm

- 2m 60cm

4m 20cm

Subtract : M CM

9m 24cm

- 5m 30cm

3m 94cm

ACTIVITY: Exercise 10f page 188 MK MTC bk 4.

**LESSON 24: Subtraction of metres and centimeters in word problem**

CONTENT : Example

1. Otim had a ribbon measuring 15m 36cm. He cut off 9m 21cm. What length remained? M CM

Otim had 15 36

He cut off - 9 21

6 15

1. Kaseggu had a string measuring 25m 15m. He cut off 18m 35cm. What length of the string did he remain with?

M CM

Subtract : M CM

9m 24cm

- 5m 30cm

3m 94cm

His string measured 25 15

He cut off - 18 35

Length of the string left 6 80

ACTIVITY: Exercise 10g page 189.

**LESSON 25: Multiplication of metres and centimetres**

CONTENT : Example 1

Mary, Joseph and Karen each bought 3m 45cm of cloth. What was the total length of cloth bought?

Each bought 3m 45cm.

Or : M CM

3 45

3 45

3 45

10 35

All together they bought 10 35.

∴ 3 pupils bought

M CM

3 45

x 3

10 35

All together they bought 10m 53cm

ACTIVITY: Exercise 10H PAGE 190

**LESSON 26: Division of metres and centimeters.**

CONTENT : Example 1

The piece of timber Apiliga and Akidde shared equally was 8m 10cm long. What length did each get?

8m 10cm shared by 2

Each got 8m 10cm ÷ 2

4 5

2 8 10 ∴ Each got 4m 5cm long

-8 10

ACTIVITY: Exercise 10i page 191

**LESSON 27: Changing kilometers into metres**

CONTENT : Example 1

Example 1

Change 5km to metres.

1km = 1000m

5km = 5 x 1000

= 5000m

∴ 5km = 5000m

Example II

Change 12km to metres.

1km = 1000m

12km = 12 x 1000

= 12000m

∴ 12km = 12000m

ACTIVITY: Exercise 10m and 10n page 195.

**LESSON 28: Changing metres to kilometers**

CONTENT : Example 1

Change 3000m to km

Since 1000m = 1km

3000m =  = 3km

ACTIVITY: Exercise 10j page 193

**LESSON 29: Writing as kilometers and metres**

CONTENT : Example 1

Write 800m as km and m

= 0 Km 800m

or 0.8km

|  |  |  |  |
| --- | --- | --- | --- |
| KM | HM | DM | M |
|  | 8 | 0 | 0 |

Example II

Write 7430m as km and m

= 7km 430m

Or 7.43km.

|  |  |  |  |
| --- | --- | --- | --- |
| KM | HM | DM | M |
| 7 | 4 | 3 | 0 |

ACTIVITY: Exercise 10k page 193 (New Edition)

**LESSON 30: Addition of long distances**

CONTENT : Example 1

Add: 15km 880m to 6km 750m.

Km m Add: Km m

15 880 13 530

+ 6 750 + 8 670

22 630 22 200

ACTIVITY: Exercise 10p page 197

**LESSON 31: Subtraction of long distances**

CONTENT : Example 1 Example 2

Subtract Km m Subtract: Km m

46 260 280 455

- 12 370 - 130 690

33 890 149 765

ACTIVITY: Exercise 10q page 198

**LESSON 32: Multiplication of long distance**

CONTENT : Example 1 Example II

Km m Km m

8 350 35 580

x 3 x 6

25 050 213 480

ACTIVITY: Exercise 10r page 200

**LESSON 33: Division of long distances**

CONTENT : Example 1

Divide 25km 40m by 4

Example II

Divide 33km 80m by 8

Km m

4 135

8 33 80

-32

1km 1080

-8

28

- 24

40

- 40

∴ = 4km 135m

Km m

6 260

4 25 40

- 24 1040

1km 8

24

24

. 0

0

(Note: 1km = 1000m)

∴ = 6km 260m

**LESSON 34**

**SUBTOPIC : Perimeter is the distance around the figure.**

CONTENT **: Find the perimeter of the figures below by measuring their sides**

**LESSON 35**

**SUBTOPIC : Finding perimeter of a square.**

CONTENT : Find the perimeter of a square whose side is 4cm

4cm

P = S + S + S + S

= 4cm + 4cm + 4cm + 4cm

= 8cm + 8cm

P = 16cm

4cm

4cm

4cm

**Note**: To find the perimeter of a rectangle, we use the formula

P = L+W+L=w

For the perimeter of a triangle,

P = S+S+S

**ACTIVITY**: Find the perimeter of the figures below:-

(a) (b)

7cm

2cm

4cm

4cm

(c) (d)

5cm

10cm

9cm

7cm

**LESSON 36:Finding the sides of squares and rectangles only when**

**given perimeter.**

CONTENT **:** Example 1

1. Find the side of a square whose perimeter is 12cm. A square has 4 sides.

If 4 sides = 12cm, let each side be L

L

L + L+ L + L

=  = 

L = 3cm

∴ Each side is 3cm long.

L

L

L

1. Find the side of an equilateral triangle whose perimeter is 12 cm

For an equilateral triangle, all sides are equal

P = S+S+S

12 cm = 3S

12cm/3 =3S/3

4cm = S

1. The perimeter of a rectangle is 20 cm. If its length is 6cm, find its width.

**LESSON 37: Finding the perimeter of combined figures.**

**CONTENT :** Example 1

Find the perimeter of the following shapes.

4cm

Perimeter = S + S + S + S + S + S

= 4 + 9 + 8 + 3 + 4 + 6

= 13 + 11 + 10

= 34cm.

9cm

4cm

6cm

3cm

8cm

Perimeter = S + S + S + S + S + S + S + S

= 8 + 3 + 3 + 3 + 2 + 4 + 3 + 3

= 18 + 12

= 30cm.

∴ Perimeter = 30cm

2cm

3cm

3cm

4cm

4cm

3cm

3cm

8cm

ACTIVITY: Exercise: 11b page 201 MK bk 4.

**LESSON 38: Finding the area by counting number of squares.**

CONTENT **: Examples**

**1**Find the area of the figures below.

A = L x W

A = 4units x 3units

A = 12 square units

2

Height = 6 units

Base = 6 units

Area =  x b x h

=  x 6 x 6

= 18 square units

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| h |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  | b |  |  |  |

3

3

Height = 6 units

Base = 5 units

Area =  x b x h

=  x 5 x 6

= 15 square units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  | 6 units |
|  |  |  |  |  |
|  |  |  |  |  |
|  | 5 units |  |  |  |

3

ACTIVITY Exercise 12c page 215.

**LESSON 39: Finding the area of a triangle :**

**CONTENT :** Example:

Find the area of the triangle below:-

Area =  x b x h

=  x 6cm x 4cm

= 3cm x 4cm

= 12cm2

3

6cm

4 cm

**ACTIVITY:** Exercise 12d page 217 MK bk 4

**LESSON 40: Find the area of a square**

**CONTENT :** Find the area of a square whose side is 3cm.

Length = 3cm

Area = S x S

= 3cm x 3cm

= 9cm2

3cm

Find the area of the figure below:

Area = S x S

= 8cm x 8cm

= 64cm2

8cm

ACTIVITY: Exercise 12a page 210.

**LESSON 41: Finding the area of a rectangle.**

CONTENT **:** Examples

Find the area of a rectangle below:-

Length (L) = 6cm

Width (W) = 3cm

Area = L x W

= 6 x 3

= 18 square cm

= 18cm2

3cm

6cm

**ACTIVITY:** Exercise 12a page 210 MK bk 4

**LESSON 42: Finding the area by separating figures.**

**CONTENT :** Find the area of a rectangle whose length is 10m by 6m.

Area of a rectangle A

A = L x W

= 5cm x 3cm

= 15cm2

5cm

2cm

2cm

B

A

3cm

3cm

Area of a rectangle A

A = L x W

= 5cm x 2cm

= 10cm2

5cm

Total Area of the figure A + B

10 + 15

= 25cm2

**ACTIVITY:** Exercise 12b page 212 MK bk 4

**LESSON 43: Finding the missing sides when given the area of a rectangle.**

**CONTENT :** Example

Find the length of a rectangle if its area is 12cm2 and with 2cm.

Area = L x W 6 = L

12 = L x 2 ∴ The length is 6cm.

 = L

L

2cm

Area = 12cm2

ACTIVITY:

* Find the width of a rectangle if its area is 20cm2 and length 5cm.
* Find the length of a rectangle if its area is 40cm2 and width 5cm.
* If the area of a rectangle is 24cm2 and its width is 4cm, find its length.

**LESSON 44**

**Mass**

**SUBTOPIC : Changing kilograms to grams**

CONTENT : Example

1. Change 4kg into grams

(b) Change kg into grams

1kg = 1000g

kg =  x 1000g

= 800g

1kg = 1000g

4kg = 4000g

200

kg = 500g

4kg = 4500g

ACTIVITY: Exercise 14c page 230 of Mk bk 4

**LESSON 45: Changing grams to kilograms**

(b) Change 4500g into kg.

1000g = 1kg

4500g =  = 

= 4.5kg or 4kg.

CONTENT : Example

(a) Change 2000g into kg

1000g = 1kg

2000g =  x 1kg

= 2kg

ACTIVITY: Exercise 14d pages 230 and 231 of MK bk 4

**LESSON 46: Addition of kilograms and grams**

Example II

Add: 104kg 420g + 187kg 350

Kg g

104 420

+187 350

291 770

CONTENT : Example

Add: Kg g

2 250

+ 3 150

5kg 400g

ACTIVITY: Exercise 14e page 231

**LESSON 47: Word problems involving addition of kilograms and grams**

CONTENT : Examples

Trevor’s father weighs 53kg 550g and his mother weighs 46kg 850g. Find their total weight.

Kg g

53 550

+ 46 850

100kg 400g

============

ACTIVITY: Exercise 14g page 232

**LESSON 48: Subtraction of kilograms and grams**

CONTENT : Examples

Subtract 59kg 423g – 39kg 651

Kg g

59 423

- 39 651

19kg 772g

Subtract : Kg g

75 640

- 28 450

47kg 190g

**ACTIVITY**: Exercise 14h page 234

**LESSON 49: Subtraction of kilograms and grams in word problems.**

CONTENT : Example

Babirye had 40kg 350g of ghee. She sold 26kg 850 of it. How much ghee did she remain with?

Kg g

She had 40 350

She sold - 26 850

She remained with 13kg 500g

ACTIVITY: Exercise 141 page 234 MK bk 4

**LESSON 50: Multiplication of kilograms and grams**

CONTENT : Example 1

Multiply 4kg 310g by 3

Work out kg g Kg gm

32 120 4 310

x 9 x 3

289kg 080g 12kg 930g

===============

ACTIVITY: Exercise 14j page 235 MK bk 4.

**LESSON 51: Half and quarter litres**

CONTENT : Example

1. How many half litre bottles of water can fill a jerrycan of 100 litres?

1 litre = 2 half litres

10 litres = 10 x 2 half litres

= 20 half litres.

1. How many litre bottles of milk can fill a jerrycan of 20 litres?

1 litre = 4 quarter litres

20 litres = (4 x 20) quarter litres

= 80 quarter litres.

ACTIVITY: Exercise 13a pages 223 and 224.

**LESSON 52: Addition of litres**

CONTENT : Example.

A home uses 95 litres of water in the morning and 87 litres in the afternoon. How much is used a day?

Morning - 95 litres

Afternoon - +87 litres

Total 182 litres

ACTIVITY: Exercise 13c pages 225 MK bk 4

**LESSON 53**

**SUBTOPIC : Addition of litres and half litres**

CONTENT : Example

Add: 1litres and 2litres

(1 + 2) litres. = 1 + 2 + + 

3 + 

3 + 1

= 4 litres

ACTIVITY: Exercise 13b page 224 and 225 Mk bk 4

**LESSON 54**

**SUBTOPIC : Addition of litres and millilitres**

CONTENT : Example 1 Example II

L ML

L ML

6 150

+ 5 270

11L 420ml

7 250

+ 2 400

9L 650ml

ACTIVITY: Exercise 13d page 227 MK Bk 4

**LESSON 55 : Changing litres to millilitres**

CONTENT : Examples

Change the following from litres to millilitres

1. 4L

1L=1000ml

4L=(4×1000) ml

= 4000ml

1. 6L

1L=1000ml

6L=(6×1000) ml

= 6000ml

**Activity: Change the following from Litres to millilitres**

1. **8L**
2. **9L**
3. **12L**
4. **10L**

**LESSON 56: Changing millilitres to litres**

CONTENT : Examples

1. 5000ml

1000ml = 1L

5000ml =

= 5L

1. 1200ml

1000ml = 1L

12000ml =

= 12L

Activity : change the following from ml to L

1. 10,000ml
2. 9000ml
3. 6000ml
4. 7000ml

**LESSON 57: Adding letters for numbers**

CONTENT : Example:

(a) m + m + m = 3m (b) x + x + x + x + x = 5x

ACTIVITY: Exercise 16f Mk Bk4 pg. 248

**LESSON 58: Collecting like terms**

CONTENT : Example:

(a) 7x + 8x + x = 16x (b) 5c + 4c + 3c = 12c

ACTIVITY: Exercise 16h Mk Bk4 pg. 250

**LESSON 59: Finding perimeter using unknowns**

CONTENT : Find the perimeter of this figure below:-

Perimeter = s + s + s

= 3p + 4p + 2p

Perimeter = 9p

4p

2p

3p

ACTIVITY: Exercise 16 Mk Bk 4 pg. 250

**LESSON 60: Collecting more like terms**

CONTENT : Example:

(b) Collect like terms

= 8b + 2p + 12b + 3p

= (8b + 12b) + (2p + 3p)

= 20b + 5p

(a) Collect like terms

= x + y + x + 3y + x

= x + x + x + y + 3y

= 3x + 4y

ACTIVITY: Exercise 16j Mk Bk4 pg. 251 and 252

**LESSON 61: Collecting like terms (Subtraction)**

CONTENT : Example:

(b) Collect like terms

= 6a + a - m

= 7a - m

(a) Collect like terms

= 9d + 4c – 3c

= 9d + c

ACTIVITY: Exercise 5k page 252

**LESSON 62: Equations with and without letters**

CONTENT : Solving equations involving addition.

Examples: (a) + 3 = 9 (b) P + 5 = 11

+ 3 – 3 = 9 – 3 P + 5 – 5 = 11 - 5

= 6 P = 6

ACTIVITY: Exercise 16c and 16d MK bk 4 pg. 246 and 247

**LESSON 63: Solving equations involving subtraction**

CONTENT : Finding the value of the unknown

Examples: (a) - 4 = 6 (b) y - 7 = 21

- 4 – 4 = 6 + 4 y - 7 + 7 = 21 + 7

= 10 y = 28

ACTIVITY: Exercise 16e pg. 247

**LESSON 64: Subtraction**

CONTENT : Example: (a) If P = 3 and m = 6, find the value of

1. P + 4 = 3 + 4

= 7

ACTIVITY: Exercise 16m Mk pg. 253

**LESSON 65: MORE SUBSTITUTION**

CONTENT : Examples: If x = 3, y = 4 and z = 5, Find the value:

(a) = x + y + z

(b) xyz

= *x* x y x z

= 3 x 4 x 5

= 60

= 3 + 4 + 5

= 12

ACTIVITY: Exercise 16n Mk bk 4 pg. 253

**LESSON 66: More substitution with (multiplication)**

CONTENT : Example:

(b) If y = 7 and z = 5, Find the value of yz

= yz = y x z

= 7 x 5

= 35

(a) If h = 2, find the value of 5h

Solution: 5h = 5 x h

= 5 x 2

= 10

ACTIVITY: Exercise 16(0) Mk bk 4 page 254

**LESSON 67: Substitution with division**

CONTENT : Example: If x = 10, Find the value of 

 =  = 5

ACTIIVITY: Exercise 16p Mk bk 4 page 254

**LESSON 68: Solving equations involving addition**

CONTENT : Example:

1. 2n + 1 = 9

2n + 1-1 = 9 – 1

 = 

n = 4

1. 4 + y = 10

4 – 4 + y = 10 - 4

= 6

(a) + 3 = 9

+ 3 – 3 = 9 – 3

= 6

ACTIVITY: Exercise 16d Mk bk 4 page 247

**LESSON 69: Solving equations involving subtraction**

CONTENT : Example:

(b) y - 4 = 7

y – 4 + 4 = 7 + 4

y = 11

(a) - 3 = 5

- 3 + 3 = 5 + 3

= 8

ACTIVITY: Exercise 16e Mk bk 4 page 247

**LESSON 70: Solving equations involving multiplication**

CONTENT : Examples.

(a) 3p = 21

 = 

P = 7

(b) 13 x = 26

 = 

= 2

**LESSON 71: Solving equations involving division**

CONTENT : Examples:

(b)  = 5

4 x  = 5 x 4

y = 20

(a) h ÷ 3 = 2

3 x  = 2 x 3

h = 6

ACTIVITY: Exercise 16r and 16s Mk bk 4 page 256

**LESSON 72: Solving mixed equations (Addition)**

CONTENT : Examples:

(a) 2y + 3 = 15

2y + 3 – 3 = 15 – 3

 = 

y = 6

(a) 4p + 1 = 17

4p + 1 – 1 = 17 – 1

 = 

P = 4

ACTIVITY: Exercise: Solve these equations.

(a) 5m + 2 = 12

(b) 7m + 1 = 15

(c) 2 + 4p =10

(d) 3p + 3 = 21

(e) 2p + 2 = 20

**LESSON 73: Mixed equations involving subtraction**

CONTENT : Examples:

(b) 6p – 7 = 17

6p – 7 + 7 + 17 + 7

6p = 24

 = 

P = 4

(a) 4p – 2 = 10

4p – 2 + 2 = 10 + 2

 = 

P = 3

ACTIVITY: Solve these equations

1. 2y – 3 = 5 (c) 6p – 1 = 23
2. 3m – 2 = 13 (d) 10y – 8 = 28

**LESSON 74: Forming and solving equations**

CONTENT : Addition and subtraction

Example:

(a) I think of a number, add 3 to it and the result is 14. What is the number? Let the number be n.

n + 3 = 14

n + 3 – 3 = 14 – 3

n = 11

∴ The number is 11.

(b) Think of a number, subtract 3 from it, my answer is 17. What is the number?

Let the number be y

y – 3 = 17

y – 3 + 3 = 17 + 3

y = 20 ∴ the number is 20.

ACTIVITY: Exercise 16t and 16u pages 257 and 258.

**LESSON 75: Forming and solving equations**

CONTENT : Multiplication and division

Example:

There are 4 groups in a class. If each group has the same number of pupils, altogether there are 40 pupils. How many pupils are in each group?

Let the number of each group be n

4 x n = 40

10

 = 

n = 10 ∴ 10 pupils are in each group

ACTIVITY: Exercise 16v and 16w on pages 259 and 260