GREENHILL ACADEMY

MATHS LESSON NOTES

FOR P.4

TERM TWO

WEEK TWO
LESSON ONE.

FRACTIONS

Definition:
A fraction is part of a whole.

Numerator and denominator
The numerator is a digit on top or above the bar.

The denominator is a digit below or under the bar.

e.g. $\frac{2}{3}$ → Numerator
3 → Denominator

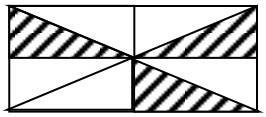
The numerator tells us the number of parts we have taken while the denominator tells us the number of parts of equal size the object is divided int.

Fraction	Numerator	Denominator
$\frac{1}{3}$	1	3
$\frac{2}{5}$	2	5

REF: Learning MTC Bk 4 pg 26
- Primary MTC Bk 4 pg 22
- Primary MTC for Ug bk 4 pg 99
- Understanding MTC bk 4 pg 54

WEEK TWO
LESSON TWO.

Shading and describing shaded parts.



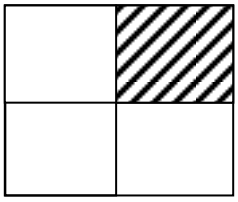
Shaded fraction = $\frac{\text{Number of shaded parts}}{\text{Number of parts}}$

= $\frac{3}{8}$

Unshaded fraction = $\frac{\text{Number of unshaded parts}}{\text{Number of parts}}$

= $\frac{5}{8}$

Example:
Write the shaded fraction in the figure.



Solution: The figure must be divided In to equal parts.

= $\frac{1}{4}$

Shade $\frac{1}{3}$

$\frac{1}{3}$ of 6 parts
= 6 parts ÷ 3 x 1
= 2 parts x 1
= 2 parts

REF: Primary School MTC Bk 4 pg 18
Primary MTC Bk 4 pg 23

WEEK TWO
LESSON THREE.

TYPES OF FRACTION

Proper fractions
A fraction whose numerator is less than its denominator.

e.g. $\frac{2}{5}$, $\frac{1}{6}$, $\frac{12}{34}$, $\frac{100}{126}$, e.t.c.

Improper fractions
It is a fraction whose numerator is bigger than the denominator.

e.g. $\frac{3}{2}$, $\frac{12}{5}$, $\frac{17}{12}$ e.t.c.

Mixed fractions
Is a fraction with a whole number and a common or proper fraction.

e.g., $\mathbf{1}\frac{1}{2}$, $\mathbf{10}\frac{1}{8}$, $\mathbf{3}\frac{4}{5}$, e.t.c.

REF: - Learning MTC Bk 4 pg27
- MK Bk 4 pg 91
- Understanding MTC Bk 4 Pg 55-57
- Primary MTC for Uganda Bk 4 Pg 11

WEEK TWO
LESSON FOUR.
Changing mixed fractions into improper fractions:

Mixed fraction: $\mathbf{4}\frac{2}{3}$

4 - Whole number
2 - Numerator
3 - Denominator

$$\frac{(\text{Denominator} \times \text{whole number}) + \text{Numerator}}{\text{Denominator}}$$

$$\frac{(d \times w) + n}{d} = \frac{(3 \times 4) + 2}{3} = \frac{12 + 2}{3} = \frac{14}{3}$$

Change $\mathbf{5}\frac{2}{3}$ into an improper fraction.

$$\mathbf{5}\frac{2}{3} = \frac{(3 \times 5) + 2}{3}$$

$$= \frac{15 + 2}{3}$$

$$= \frac{17}{3}$$

REF: - Learning MTC bk 4 pg 27
- MK Bk 4 pg 91

WEEK TWO
LESSON FIVE.

Changing Improper fractions into mixed fractions.

Examples:

1. Change $\frac{3}{2}$ into a mixed fraction.

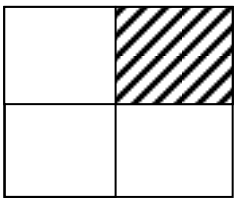
$3 \div 2 = 1$ rem. 1

Therefore, $\frac{3}{2} = 1\frac{1}{2}$

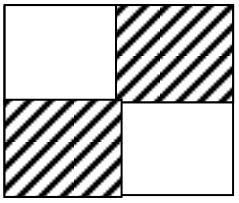
Equivalent fractions

These are fractions which have the same value when simplified.

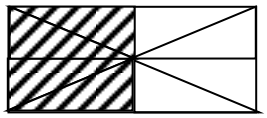
e.g.



½



2/4



4/8

N.B. All the shaded parts are equal.

.: The equivalent fractions for ½ are 2/4, 4/8, e.t.c.
REF: Primary school MTC Bk 4 pg 19

WEEK THREE
LESSON ONE.

Finding equivalent fractions by calculation

List down 3 equivalent fractions of 1/3

a) $1/3 = \frac{1}{3} \times \frac{2}{2} = 2/6$

$1/3 = \frac{1}{3} \times \frac{3}{3} = 3/9$

$1/3 = \frac{1}{3} \times \frac{4}{4} = 4/12$

$1/3 = \frac{1}{3} \times \frac{5}{5} = 5/15$

---

b) $2/5 = \frac{2}{5} \times \frac{2}{2} = 4/10$

$2/5 = \frac{2}{4} \times \frac{3}{3} = 6/12$

$2/5 = \frac{2}{4} \times \frac{4}{4} = 8/16$

$2/5 = \frac{2}{3} \times \frac{5}{5} = 10/25$

WEEK THREE
LESSON TWO.
Finding the missing number

1. $½ = \square/6$

$= 6 \div 2$
$= 3$
$= 1 \times 3$
$= 3$

2. 2/5 = 10/x
= 10 ÷ 2
= 5
= 5 x 5
= 25

REF: - Learning MTC Bk pg 28
- Primary School MTC Bk 4 pg21
- MK Bk 4 pg 82

WEEK THREE
LESSON THREE.
Reducing fractions to their lowest terms.

Equivalent fractions can also be made by dividing the numerator by the same number (G.C.F.).

N.B. When there is no whole number which can be divided exactly into the numerator and denominator then the fraction is in its lowest terms.

1. Reduce 4/6 to its lowest terms.

$\frac{4}{6} \div \frac{2}{3} = \frac{2}{3}$

2. Reduce 9/18 to its simplest form.

$\frac{9}{18} \div \frac{9}{9} = \frac{1}{2}$

REF: - Primary School MTC bk 4 pg 21
- Primary MTC MK Bk 4 pg 84

WEEK THREE
LESSON FOUR.

Comparing fractions
Which is greater; ½ or 1/3?

Rename 1/2 = 2/4 = (3/6)

1/3 = (2/6)

1/2 is greater.

Use >, < or = to complete

2 /3 _____ 4/6

2/3 = (4/6) = 6/9

(4/6) = 8/12 = 12/18

2/3 = 4/6

REF: Learning MTC Bk 4 pg 109
Understanding MTC Bk 4 pg 60
Learning MTC Bk 4 pg 29

WEEK THREE
LESSON FIVE.

<u>Ordering fractions</u>

Arrange the following fractions starting from the smallest:
1/3, 1/2 , 1/4

Rename: 1/3 = 2/6 = 3/9 = (4/12) = 5/15

1/2 = 2/4 = 3/6 = 4/8 = (6/12)

1/4 = 2/8 = (3/12) = 4/16 = 5/20

.: The order is: 1/4, 1/3, 1/2

REF: Primary sch. MTC Bk 4 pg 23
MTC Bk 4 pg 36

WEEK FOUR
LESSON ONE AND TWO.

<u>Addition of fractions with the same denominators:</u>

Addition of fractions with the same denomination

1. 1/5 + 2/5 = 42/5 = 3/5

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

Addition of fractions with different denominators

1. Add: ½ + 1/3
   Rename: = 1/2 = 2/4 = 3/6 = 4/8

   = 1/3 = 2/6 = 3/9 = 4/12

   ½ + 1/3 = 3/6 + 2/6 = $\frac{3+2}{6}$ 5/6

2. 2/3 + 1/4
   Rename: 2/3 = 4/6 = 6/9 = 8/12 = 10/15
   ¼ = 2/8 = 3/12 = 3/12 = 4/16 = 5/12

   2/3 + 1/4= 8/12 + 3/12 $\frac{8 + 3}{12}$ = $\frac{11}{12}$

REF: Primary MTC for Ug bk 4 pg 105
Understanding MTC bk 4 pg 61
MTC Primary MTC Bk 4 pg 94

WEEK FOUR
LESSON THREE

Addition of mixed fractions.

3. **6** 2/7 + **1** 3/7 = (**6** + **1**) + 2/7 + 3/7

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

   = **7** + 5/7
   = **7** 5/7

REF: Learning MTC Bk 4 pg 33
Primary MTC for Uganda bk 4 pg 104
Understanding MTC BK 4 Pg 46

WEEK FOUR
LESSON FOUR.

Subtraction of fractions with the same denominators

1. $5/6 - 1/6 = \frac{5-1}{6} = \frac{4}{6}$

2. Subtract: $4\ 2/5 - 2\ 1/5$
   $= (4-2) + (2/5 - 1/5)$
   $= 2 + \frac{2-1}{5}$

REF: Learning MTC BK 4 Pg 34
Understanding MTC BK 4 PG 44
MK bk 4 pg 95

Subtract fractions with different denominators

Subtract: 1/2 - 1/3

Rename: 1/2 - 1/3 = 3/6 = 4/8 = 5/10 = 6/12

1/3 = 2/6 = 3/9 = 4/12 = 5/15 = 6/18

½-1/3 = 3/6 - 2/6 = $\frac{3-2}{6}$
= 1/6

REF: Primary MTC for Uganda bk 4 pg 110
Understanding MTC bk 4 pg 62

WEEK FOUR
LESSON FIVE.

Subtracting a fraction from a whole

1. 1 - 1/2
   2/2 – 1/2 = $\frac{2-1}{2}$ 1/2

2. 1 - 3/12
   12/12 - 3/12 = $\frac{12 - 3}{12}$ 9/12

3. John at ¼ of a cake. What fraction of the cake is left?
1 – ¼ = 4/4 – ¼
= $\frac{4 - 1}{4}$ = 3/4

REF: Learning MTC Bk 4 pg 34

Subtractions of mixed fractions.

1. **7 2/5 _ 2 1/5**
   = (7_ 2) + (2/5 _ 1/5 **)**
   = 5 + 1/5
   =5 1/5

WEEK FIVE
LESSON ONE

<u>Multiplication of fractions</u>

Multiplication of a fraction by a whole (parts of a group)

1. What is ½ of
2. 2/3 of 6 oranges

 = 4 oranges

OR: 2/3 x 6 = (6 ÷ 3) x 2
= 2 x 2
= 4 oranges

2/3 x 6
$\frac{2 \times 6}{3} = \frac{12}{3} = 4$

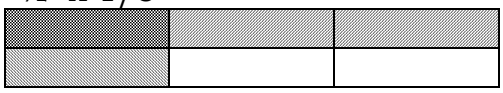
3. 4/5 x 20 boys
   (20 ÷ 5) x 4
   4 x 4
   16 boys

REF: Understanding MTC Bk 4 pg 48

Multiplying a fraction by a fraction:

1. 1/3 x 2/4 = $\frac{1 \times 2}{3 \times 4}$ = 2/12

2. ½ x 1/3



Number of parts shaded twice = 1/6

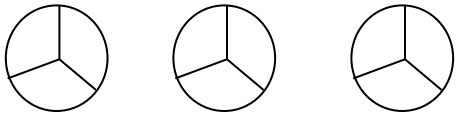
OR: ½ x 1/3 = $\frac{n \times n}{d \times d}$

= $\frac{1 \times 1}{2 \times 3}$ = 1/6

WEEK FIVE
LESSON TWO
Division of fractions

Divide a whole by a fraction

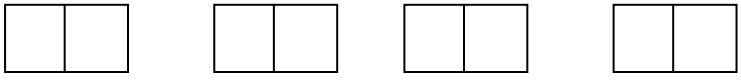
Example: 3 ÷ 1/3 (How many thirds are on 3 wholes)



= 9 thirds

.: 3 ÷ 1/3 = 9

4 ÷ 1/2 (How many halves are in 4 wholes)



= 8

.: 4 ÷ ½ = 8

REF: MK bk 4 pg

WEEK FIVE
LESSON THREE

Application of fractions

1. There are 24 boys in a class. If 2/3 of them play football, how many boys play football?

2/3 of 24 = 2/3 x 24
= (24 ÷ 3) x 2
= 8 x 2
= 16 boys

---

2. There are 40 pupils in P.4. 2/5 of them are boys and the rest are girls.
   a) Find the fraction for girls.

1 – 2/5 = 5/5 – 2/5

= 3/5

---

   b) How many boys are in the class?

2/5 of 40 = 2/5 x 40

= 2 x 8

= 16 boys

---

   c) How many girls are in the class?

4 0
- 1 6
2 4 girls

OR: = 3/5 of 40
= 3/5 x 40
= 3 x 8 = 24 girls

WEEK FIVE
LESSON FOUR.

DECIMALS

Changing common fractions into decimals

1. Change 2/10 into a decimal.

$$
\begin{array}{lll}
 & \underline{0.2} & \\
2/10 = & 10\,|\,2 & \\
0 \times 10 = - & \underline{0} & \\
 & 2\ 0 & = \quad 0.2 \\
2 \times 10 = - & \underline{2\ 0} & \\
 & - \ - &
\end{array}
$$

2. Change 3/10 into a decimal

$$
\begin{array}{lll}
 & \underline{0.3} & \\
3/10 = & 10\,|\,3 & \\
0 \times 10 = - & \underline{0} & \\
 & 3\ 0 & = \quad 0.3 \\
3 \times 10 = - & \underline{3\ 0} & \\
 & - \ - &
\end{array}
$$

3. Change 2/5 into a decimal.

$$
\begin{array}{lll}
 & \underline{0.4} & \\
2/5 = & 5\,|\,2 & \\
0 \times 5 = - & \underline{0} & \\
 & 2\ 0 & = \quad 0.4 \\
4 \times 5 = - & \underline{2\ 0} & \qquad - \ -
\end{array}
$$

REF: Understanding MT bk 4 pg 15
MK Bk 4 pg 25
Primary MTC Bk 4 pg 25

WEEK FIVE.
LESSON FIVE.
Changing decimals to fractions

1. Change 0.2 into a common fraction.

$$
\begin{aligned}
0.2 &= (0 \times 1) + (2 \times 1/10) \\
&= 0 + 2/10 \\
&= 2/10
\end{aligned}
$$

2. Write 0.4 as a common fraction.

$$
\begin{aligned}
0.4 &= (0 \times 1) + (4 \times 1/10) \\
&= 0 + 4/10 \\
&= 4/10
\end{aligned}
$$

REF: Primary MTC bk 4 pg 25
MK bk 4 pg 100
Understanding MTC bk 4 pg 15
Learning MTC bk 4 pg 36 and 41

WEEK SIX.
LESSON ONE.

Expressing mixed fractions as decimals

1. Change **1** 7/10 to a decimal

= 1 + 7/10

= 1 + 0.7
= 1.0
+ 0.7
1.7

2. Change **2** 4/10 to a decimal

= **2** + 4/10

= **2** + 0.4
= 2.0
+ 0.7
2.4

REF: MK Bk 4 pg 101

WEEK SIX.
LESSON TWO.

Expressing decimals as mixed fractions

1. Change 1.5 to a common fraction

1.5 = (1 x 1) + (5 x 1/10)
= 1 + 5/10
= **1** 5/10

---

2. Write 12.9 as a common fraction

12.9 = (1 x 10) + (2 x 1) + (9 x 1/10)
= 0 + 2 + 9/10
= **2** + 9/10
= **2** 9/10

REF: MK Bk 4 pg 101

WEEK SIX.
LESSON THREE.

Addition of decimals

1. Add: 1.3 + 2.6
   = 1.3
   + 2.6
   3.9

2. Find the sum of 1.4 and 2.8
   = 1.4
   +2.8
   4.2
3. I ate 0.2 of a cake in the morning, 0.1 in the afternoon and 0.3 in the evening. What fraction did I eat altogether?

   0.2
   0.1
   + 0.3
   0.6

REF: Learning MTC Bk 4 pg 43
MK Bk 4 pg 102
Primary Sch MTC for Ug Bk 4 47

WEEK SIX.
LESSON FOUR.
Subtraction of decimals

1. Subtract: 0.5 – 0.2
   = 0.5
   - 0.2
   0.3

2. Subtract: 3.7 – 1.4

   = 3.7
   - 1.4
   2.3

3. Subtract: 3.3 – 1.6

$$\begin{array}{r} {}^{2}\cancel{3}.{}^{1}3 \\ -\ 1.\ 6 \\ \hline 1.\ 7 \end{array}$$

REF: Primary MTC for Ug bk 4 pge 48
Primary sch. MTC Bk 4 pg 30

WEEK SIX.
LESSON FIVE.

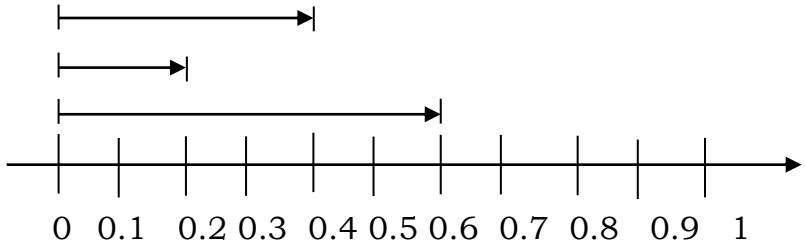
Ordering and comparing decimals
Use >, <, or = to complete

1. 0.2 < 0.3

   2/10 3/10

2. 0.7 > 0.4
   7/10 > 4/10

Arrange 0.6, 0.2, 0.4 starting with the smallest.



Therefore: 0.2, 0.4, 0.6

Arrange 0.7, 0.3, 0.5 starting with the larges.
0.7, 0.5, 0.3

REF: MK Bk 4 pg 107

WEEK SEVEN.
LESSON ONE.

MEASURES (LENGTH)

- Length is **the distance between two points**.
- The basic units for measuring length is **metres.**
- The standard units for length are **Kilometres** and **metres.**

Units of length from the biggest to the smallest.

Km	**Hm**	**Dm**	**m**	**dm**	**cm**	**mm**
1	0	0	0	0	0	0
	1	0	0	0	0	0
		1	0	0	0	0
			1	0	0	0
				1	0	0
					1	0

Expressing metres as centimetres

1. Change 6m to cm.

m	**dm**	**cm**
1	0	0

1m = 100cm

Big to small you multiply (x)
6m = (6 x 100)
= 600cm

–

2. Express 2 ½ m as cm

m	**dm**	**cm**
1	0	0

1m = 100cm

Big to small = (x)

2 ½ m = 2 + ½
= (2 x 100)cm +(1/2 x 100)cm
= 200cm + 50cm
= 250cm.

Or;
Change 2 ½ m into an improper fraction

2 1/2m = 5/2m
= 5/2 x 100
= 5 x 50
= 250cm

WEEK SEVEN.
LESSON TWO.
Expressing centimetres to metres

1. Change 400m to metres

m	**dm**	**cm**
1	0	0

100cm = 1m

mall to big you divide (÷)

400cm = $\frac{400}{100}$
= 4 ÷ 1
= 4m

---

2. Change 1900cm to metres

m	**dm**	**cm**
1	0	0

100cm = 1m

Small to big you divide (÷)

1900cm = $\frac{1900}{100}$
= 19 ÷ 1

= 19m

Ref: MK BK 4 pg 186

WEEK SEVEN.

LESSON THREE.

Converting centimetres to metres and cm

1. Convert 120cm to metres and cm

m	**dm**	**cm**
1	0	0

100cm = 1m

120cm = 100cm + 20cm

Small to big you divide (÷)

$120\text{cm} = \frac{100}{100} + 20\text{cm}$

$= 1 \div 1 + 20\text{cm}$

= 1m 20cm

---

2. Change 840cm to metres and cm.

m	**dm**	**cm**
1	0	0

100cm = 1m

840cm = 800cm + 40cm

Small to big = (÷)

$840\text{cm} = \frac{800}{100} + 20\text{cm}$

$= 8 \div 1 + 40\text{cm}$

= 8m 40cm

Ref: MK bk 4 pg 181

WEEK SEVEN.
LESSON FOUR.

Addition of metres and centimeters

1. Add: 2m 45cm + 6m 36cm

	m	cm
	2	45
+	6	36
	8	**81**

SW

1
45
+ 36
81

2.

	m	cm
	8	25
+	6	85
	15	**10**

SW

1
25
+ 85
110

110
100
1 r 10

REF: MK Bk 4 pg 187

WEEK SEVEN.
LESSON FIVE.

Subtraction of metres and centimetres

1. Subtract:

	m	cm
	6	80
-	2	60
	4	**20**

SW

80
- 60
20

---

2. M cm **SW**

9	24		1m = 100ccm	0 x 124
-	5	30	100 + 24 = 124	- 30
	3	94		094

–

3. Tom had 3m 70cm of cloth. He used 1m 20cm. How much cloth remained?

	m	cm	**SW**
	3	70	70
-	1	20	- 20
	2	**50**	50

Ref: MK Bk 4 pg 189
Learning MTC Bk 4 pg

WEEK EIGHT.
LESSON ONE.

Multiplication of metres and centimetres

1. Multiply: 6m 25cm x 6

m	cm	SW	25	150
6^1	25		x 6	100
x	6		150	1 r 50
37	**50**			

2. Mary, Ben and Kareen bought a cloth 3m 45cm each. What was the total size of the cloth?

m	cm	SW	45	135
3^1	45		x 3	100
x	3		135	1 r 35
10	**53**			

–

Ref: learning MTC bk 4 pg 50.
MK Bk 4 pg 190

WEEK EIGHT.
LESSON TWO.

Expressing Km to metres

1. Change 7Km to metres

Km	Hm	Dm	m
1	0	0	0

1Km = 1000m

7Km = (7 x 1000)m

= 7000m

---

2. Change 4 ½ Km o metres

Km	Hm	Dm	m
1	0	0	0

1Km = 1000m

4 ½ Km = 4 + ½ Km

= (4 x 1000)m + (1/2 x 1000)m
= 4000m + 500m
= 4500m

Ref: MK Bk 4 pg 195

WEEK EIGHT.
LESSON THREE.

Expressing metres to Km.

1. Change 3000m as Km.

1000m = 1Km

3000m = $\left(\frac{3000}{1000}\right)$Km

= 3 ÷ 1

= 3Km

---

2. Express 2000m as Km.

1000m = 1Km

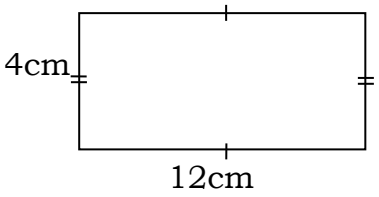
2000m = $\left(\frac{2000}{1000}\right)$Km

= 2 ÷ 1

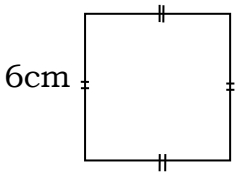
= 2Km

WEEK EIGHT.
LESSON FOUR.
Perimeter of a Rectangle and Square

Find the perimeter of the following.



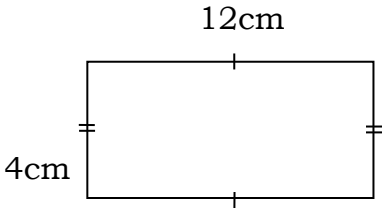
Perimeter = Length + Width + Length + Width
= L + W = L = W
= (12cm + 4cm) + (12cm + 4cm)
= 16cm + 16cm
= 32cm



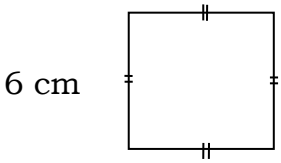
Perimeter = Side + Side +Side +Side
= S + S + S + S
= 6cm + 6cm +6cm + 6cm
= 36cm

WEEK EIGHT.
LESSON Five.

Area of a rectangle and a square



Area = L X W
= 12 cm x 4 cm
= 48 cm^2.

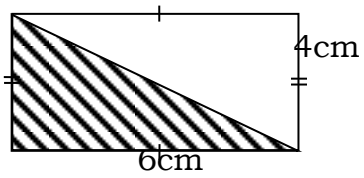


Area = S X S
= 6 cm x 6 cm
= **36** cm^2

WEEK NINE.
LESSON ONE.

Area and Perimeter of a triangle

1.



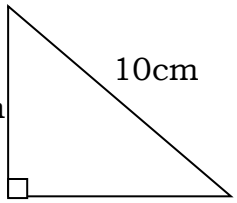
Area of a rectangle = L X W
= 6cm x 4cm
= $24cm^2$

Area of the shaded part is half the area of the rectangle.
= $24cm^2 \div 2$
= $12cm^2$

Area of a triangle = ½ x base x height
= ½ x b x h
= ½ x 6cm x 4cm
= $12cm^2$

Find the area of the triangle.

Base = 4cm height = 3cm



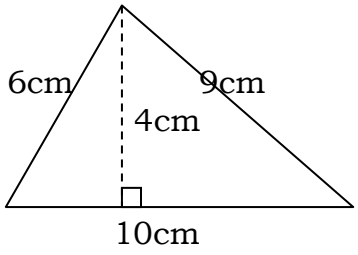
Height = 3cm

Area = ½ x b x h
= ½ x 4cm x 3cm
= 2cm x 3cm
= 6cm^2

_Calculate the Perimeter

Perimeter = S + S + S
= 10cm + 4cm + 3cm
= 17cm

_Find the area and perimeter of the triangle shown.



Base = 10cm
Height = 4cm

Area = ½ x b x h
= ½ x 10cm x 4cm
= 10cm x 2cm
= 20cm^2

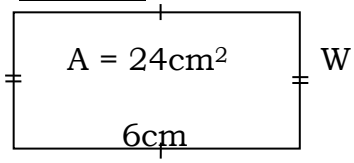
Perimeter = S + S + S
= 9cm + 6cm + 10cm
= 15cm + 10cm
= 25cm

Ref: Understanding MTC bk 4 pg 107

WEEK NINE.
LESSON TWO.
Finding the missing side of a rectangle

1. The area of a rectangle is 24cm2. If its length is 6cm, find its width.

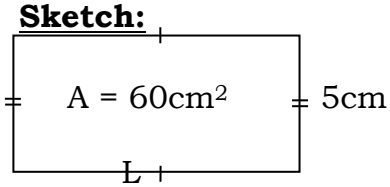
Sketch:



L	x	W	=	A
6cm	x	W	=	$24cm^2$
		6Wcm	=	$24cm^2$
		W	=	$\frac{24\ cm^2}{6cm}$
		W	=	4cm

_Find the length of a rectangle whose width is 5cm if its area is 60cm2.

Sketch:



L	x	W	=	A
L	x	5cm	=	$60cm^2$
		5Lcm	=	$60cm^2$
		L	=	$\frac{60\ cm^2}{5cm}$
		L	=	12cm

REF: MK BK 4 PG 205
Learning MTC BK 4 PG 91

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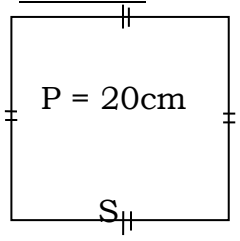
WEEK NINE.
LESSON THREE.
Finding the side of a square given its perimeter

1. The perimeter of a square is 20cm.
   Find its sides.

Sketch:



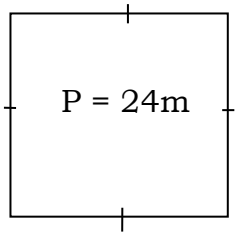
S + S + S + S	=	P	
4S	=	20cm	
$\frac{4S}{4}$	=	$\frac{20cm}{4}$	
S	=	5cm	

_

Find its area.

Area	=	Side x Side
	=	S x S
	=	5cm x 5cm
	=	$25cm^2$

2. Find the value of x in the figure.



S + S + S + S	=	24m
x + x + x + x	=	24m
4x	=	24m
4x	=	24m
4		4
X	=	6m

_

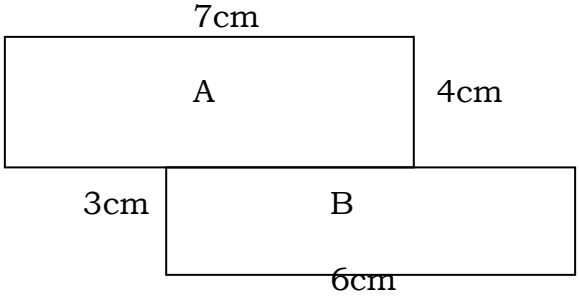
REF: Learning MTC Bk 4 pg 87

MK Bk 4 pg 204

WEEK NINE.
LESSON FOUR.

Addition of area

Find the area of the figure.

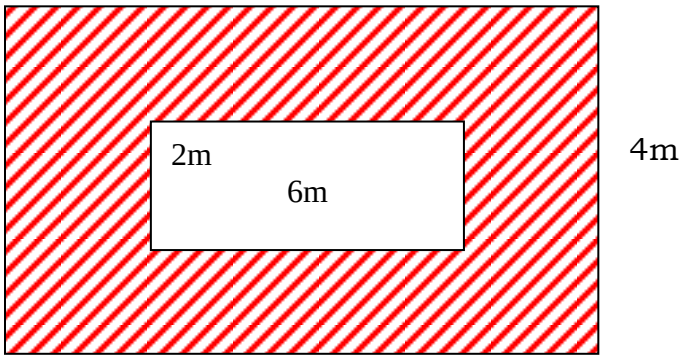


Area	=	Area of A	+	Area of B
	=	(L x W)	+	(L x W)
	=	(7cm x 4cm)	+	(6cm x 3cm)
	=	$28cm^2$	+	$18cm^2$
	=	$46cm^2$		

_REF: MK BK 4 Pg 212 - 213

Subtraction of area

Given the figure below, use it to answer the questions that follow.



1. Find the area of the small rectangle.

   A = L x W
   = 6m x 2m
   = $12m^2$

2. Calculate the area of the big rectangle.

   A = L x W
   = 10m x 4m
   = $40m^2$

---

3. Find the area of the shaded part.

Area of the shaded part = Area of big rectangle – Area of small rectangle
= $40m^2$ - $12m^2$

$$\begin{array}{rr} & 4\ 0 \\ - & 1\ 2 \\ \hline & 2\ 8 m^2 \end{array}$$

REF: MK Bk 5 pg

Learning MTC Bk 4 PG 88 - 89

N.B. Consider block question (Find the area of the shaded part)

Ref: learning MTC bk 4 pg 88 – 89

WEEK NINE.
LESSON FIVE.

GRAPHS
Reading and interpreting picture / pictographs

The pictograph below show the number of trees planted by three boys.

Okot	
Okello	
Kintu	

Scale:  = 5 trees

a) How many trees were planted by Kintu?

= 5 x 5
= 25 trees

---

b) How many more trees were planted by Okot than Okello?

Okot > 3 x 5 = 15 trees

Okello> 2 x 5 = 10 trees

More trees > 1 5 trees
1 0 trees
0 5 more trees

c) Find the total number of trees planted.
= 10 x 5
= 50 trees

REF: MK Bk 4 pg 123

WEEK TEN.
LESSON ONE AND TWO.

Drawing pictographs
Make a pictographs for the following information.

- John has 12 balls
- Mega has 15 balls
- Sarah has 18 balls
- Kamoga has 9 balls.

Scale:  = 3 balls

Solution:

John > $\frac{12}{3} = \frac{4m}{3}$

Mega > $\frac{15}{3}$ = 5 balls

Sarah> $\frac{18}{3}$ = 6 balls

Kamoga> $\frac{9}{3}$ = 3 balls

NAME	**NUMBER OF BALLS**
John	
Mega	
Sarah	
Kamoga	

_____
_

REF: MK Bk 4 pg 117

Reading and interpreting bar graph.

Refer to page 122 MK MTC Bk 4

REF: BK 4 Pg 122 and 120

Reading interpreting pie charts.

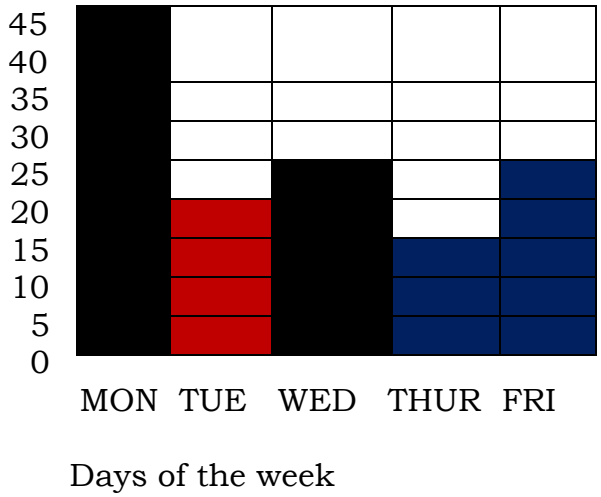
Refers to understanding MTC bk 5 pg 19 for the graph.

LESSON THREE.

BAR GRAPHS

Interpreting the scales of a bar graph

The bar graph below shows the daily attendance of P4 pupils for a week. Study it and answers the following questions.



a) What is represented on the vertical axis?
b) What is represented on the horizontal axis?
c) How many pupils were present on Thursday?
d) Which days had the same number of attendance?
e) How many more pupils attended on Wednesday than Friday?

LESSON FOUR

Tallies

Organizing data by tallying

Example 1

One 1

Two 11

Three 111
Five 1111
Ten 1111 1111
Twelve 1111 1111 11

LESSON FIVE

Finding the mode

Mode is the term or the number that appears many times.
Example 1
Kennedy got the following marks in an exam 70,88,70,90,85.
Find his modal mark

MARK	TALLY
70	11
85	1
88	1
90	1

Therefore the mode is 70

WEEK ELEVEN

LESSON ONE

Finding the range

Range is the difference between the highest and the smallest.
Maureen scored the following goal in the four netball matches
7,9,6,5.
Find the range.
9-5 =**4**

FINDING THE MEDIAN

Median is the middle term or number.
It's got by arranging the terms or number in ascending or descending order.

example

Find the median of ;
43,74,49,90,10.

10,43.**49,**74,90.

There for the median is 49

FINDING THE MEAN

Mean is total sum of given marks divided by the total number.

Example;

Find the mean of the following numbers.

3,5,4,6,2.

$$\text{Mean} = \frac{2+3+4+5+6}{5}$$

$$= \frac{20}{5}$$

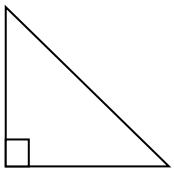
$$= \mathbf{4}$$

Geometry

WEEK TWO
LESSON ONE AND TWO

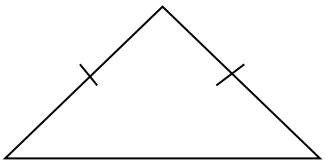
Triangle
A triangle is a three sided polygon.

Types of triangles
1. Right angled triangles



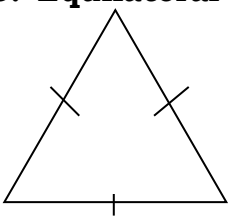
This is a triangle with one of its angles measuring 90^0

2. Isosceles triangle



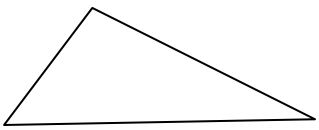
- Two sides and angles are equal
- Has one line of symmetry

3. Equilateral triangle



- Has all of its sides equal
- All its angles measure 60^0
- Has three lines of symmetry

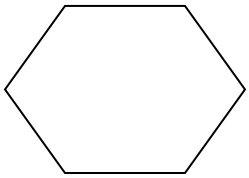
4. Scalene triangle



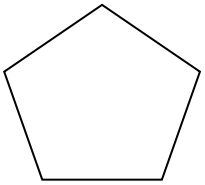
- All sides and angles measure differently
- Has no line of symmetry

Other polygons include Hexagon, Pentagon

Hexagon
It is a 6 sided figure



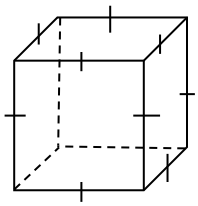
Pentagon
It is a five sided figure



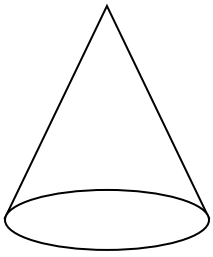
SOLID SHAPES.
A solid shape has faces, edges and vertices.
Example
Sphere, cone, cuboid, cube, pyramid, prism, cylinder, etc.

WEEK THREE
LESSON ONE AND TWO

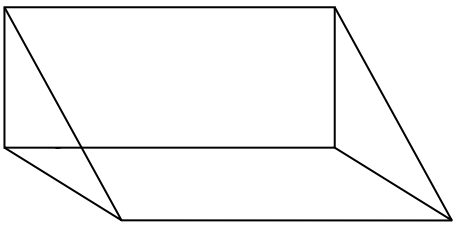
Drawing and naming solid shapes
1. Cube



3. Cone

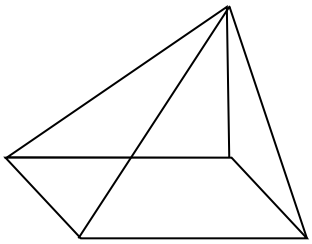


2. Triangular prism

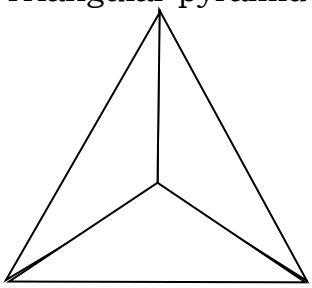


4 .Cylinder

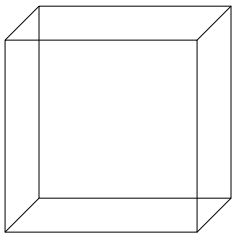
7. Rectangular pyramid



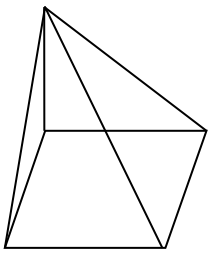
5.Triangular pyramid



6.Cuboid



8. Square pyramid



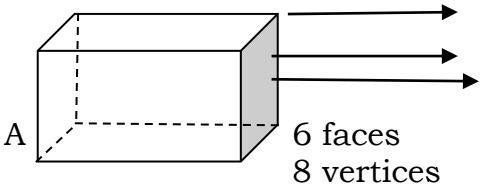
WEEK FOUR
LESSON ONE AND TWO

Naming parts of solid figures.

Parts of solid shapes are:

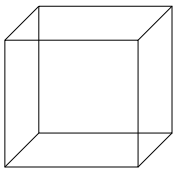
- Faces
- Edges
- Vertices

Cuboid



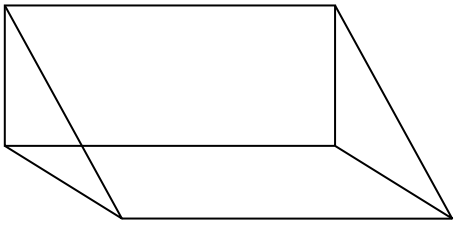
6 faces
8 vertices
12 edges

Cube



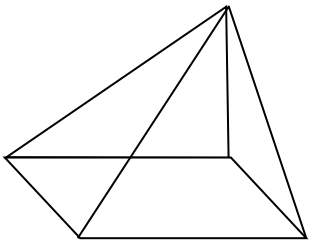
It has: 6 faces
8 vertices
12 edges

Triangular prism



It has: 5 faces
6 vertices
9 edges

Rectangular pyramid



It has: 5 faces
5 vertices
8 edges

WEEK FIVE

LESSON ONE AND TWO

Construction of angles

60◦ Angle

Steps

- -draw a line
- -open a compass to a given length
- -mark two points on a line
- -stand on each point and mark crossing arcs
- -join the points as shown below.

WEEK SIX

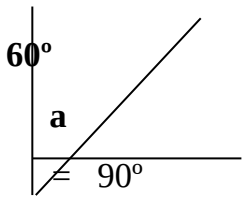
LESSON ONE AND TWO

Constructing an angle of 90◦

Steps;

- Draw a line of any length
- -mark the centre on the line
- -open the compass to any length
- -stand at the centre and mark equidistant points on either sides
- -stand on each point and mark crossing arcs
- -draw a line to pass through the crossing arcs and the centre.

Finding the missing angles on a right angle.

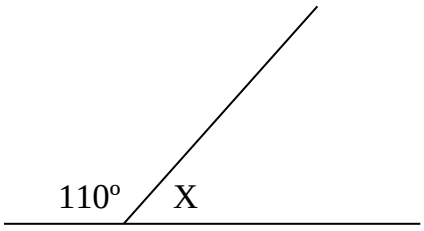


a + 60º = 90º

a + 60º-60º = 90º-60º

a = 30

Finding the missing angles on a straight line.



$x + 110^o = 180^o$

$x + 110^o - 110^o = 180^o - 110^o$

$x = 70^o$

ALGEBRA

WEEK TWO

Collecting like terms

1. Collect like terms: $4x + 8y + 2x + 5y$
   $= (4x + 2x) + (8y + 5y)$
   $= 6x + 13y$

2. Collect like terms: $9m + 7n – 2m – 3n$
   $= (9m – 2m) + (7n – 3n)$
   $= 7m + 4n$

REF: MK Bk 4 pg 252
Understanding MTC Bk 4 pg 156

WEEK THREE
Substitution
Substitution means to replace:
1. If x = 3, y = 4 and z = z = 5, Find the value of
   $= x + y + z$
   $= (3 + 4) + 5$
   $= 7 + 5$
   $= 12$

2. If h = 12, find the value of 5h

5h means 5 x h
= 5 x 2
= 10

3. If a = 5, y = 4, find the value of a^{y}

REF: MK Bk 4 pg 253 – 254
Learning MTC bk 4 pg 102 – 103

WEEK FOUR

Solving equations involving addition

1. Find the missing number

☐ + 3 = 9
☐ + 3-3 = 9 - 3
☐ = 6

:. The missing number is 6

---

2. Solve for k

K + 4 = 9
K + 4-4 = 9 – 4
K = 5

If 3 + m = 8
What is m?
3 + m = 8
3 – 3 + m = 8 – 3
m = 5

REF: MK Bk 4 pg 246 – 247
Understanding MTC Bk 4 pg 159

Forming and solving equations with addition

Wamala had some books. He got 3 more books. Altogether he had 7 books. How many books did he have before?
8 - 159
Let the books he had be x.

x + 3 = 7
x + 3-3 = 7 – 3
x = 4

:. He had 4 books.

REF: MK Bk 4 pg 257
Understanding MTC Bk 4 pg 159

WEEK FIVE

Equations involving subtraction

1. If $\square - 4 = 6$, Find the value of what is in the box
   $\square - 4 = 6$,
   $\square - 4+4 = 6+4$
   $\square = 10$

   :. The value of what is in the box is 10.
2. Solve for m:
   $m - 3 = 2$
   $m - 3+3 = 2+3$
   $m = 5$

REF: MK Bk 4 pg 247

Forming and solving equations with subtraction

Mulloli had some goats. When he sold them he remained with 9 goats. How many goats had he before?

Let the number of goats he had be g.

$g - 5 = 9$
$g - 5 + 5 = 9 + 5$
$g = 14$

:. He had 14 goats.

REF: MK Bk 4 pg 258

WEEK SIX

Equations involving multiplication

1. If ☐ x 3 = 12, What is in the box?

☐	x 3	=	12	OR;	☐	x 3	= 12
☐	x 3÷3	=	12÷3		☐	3	= 12
☐	x 1	=	4			3	3
☐		=	4		☐		= 4

:. The box has got 4

---

2. If 3P = 21, Find P

$$3P = 21$$

$$\frac{3P}{3} = \frac{21}{3}$$

$$P = 7$$

REF: MK Bk 4 pg 225
Understanding MTC Bk 4 pg 160

Forming equations with multiplication

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

Let the pupils in each group be c.

$$4 \times c = 40$$

$$\frac{4c}{4} = \frac{40}{4}$$

$$C = 10$$

:. Each group has 10 pupils.

REF: MK Bk 4 pg 259

WEEK SEVEN

Equations involving division

3. If $\square \div 2 = 4$, What is in the box?

$\square \div 2 = 4$

$\square \div 2x2 = 4x2$

$\square \div 1 = 8$

$\square = 8$

:. The box has got 8

---

4. Solve for x:

$x \div 3 = 6$

$\frac{x}{3} = \frac{6}{1}$

$\frac{x \times 3}{3} = \frac{3 \times 6}{1}$

$x = 18$

---

5. $a/2 = 3$

$\frac{a \times 2}{2} = \frac{3 \times 2}{1}$

$a \times 1 = 2 \times 3$

$a = 6$

REF: MK Bk 4 pg 256

Forming equations involving division

Nakandi had some balls.

She divided them into 4 groups. If there were 12 balls in each group, how many balls did she have altogether?

Let the balls she had be b.

$b \div 4 = 12$

$b \div 4 \times 4 = 12 \times 4$

$b = 48$

:. She had 48 balls altogether.

WEEK EIGHT

Equations involving more than one operation

1. Solve for y.

$2y + 5 = 17$

$2y + 5 - 5 = 17 - 5$

$2y = 12$

$\frac{2y}{2} = \frac{12}{2}$

$y = 6$

2. Solve for m

$3m - 9 = 12$

$3m - 9 + 9 = 12 + 9$

$3m = 21$

$\frac{3m}{3} = \frac{21}{3}$

$m = 7$

REF: MK Bk 5 Pg 278 – 279