

GREENHILL ACADEMY

P. 6 MATHEMATICS LESSON

NOTES

TERM 3 - 2025

Lesson 1, 2 and 3 week one

MEASUREMENT: LENGTH, MASS AND CAPACITY.

LENGTH

Revision: Changing km to cm
 Changing Metres to Kilometres
 Changing metres to cm
 Changing cm to metres
 Changing millimeters to cm

CHANGING SQUARE METRES TO SQUARE CENTIMETRES

$$1\text{M} = 100\text{Cm}$$

$$1\text{M}^2 = 100\text{cm} \times 100\text{cm}$$

$$1\text{M}^2 = 10,000\text{cm}^2$$

Change 2m^2 to cm^2

$$1\text{M}^2 = 10,000\text{cm}^2$$

$$\begin{aligned} 2\text{m}^2 &= 2 \times 10,000\text{cm}^2 \\ &= 20,000\text{cm}^2 \end{aligned}$$

Express 1.2m^2 as cm^2

$$1\text{M}^2 = 10,000\text{cm}^2$$

$$\begin{aligned} 1.2\text{m}^2 &= \frac{12}{10} \times 10,000\text{cm}^2 \\ &= \underline{\underline{12000\text{cm}^2}} \end{aligned}$$

CHANGING SQUARE CENTIMETRES TO SQUARE METRES

Change 9000cm^2 to m^2

$$10,000\text{cm}^2 = 1\text{M}^2$$

$$1\text{cm}^2 = \frac{1}{10,000}\text{m}^2$$

$$9000\text{cm}^2 = \frac{1}{10,000} \times 9000\text{m}^2$$

$$\frac{9}{10}$$

$$= \underline{\underline{0.9\text{m}^2}}$$

Convert 120000cm^2 to m^2

$$10,000\text{cm}^2 = 1\text{M}^2$$

$$1\text{cm}^2 = \frac{1}{10,000}\text{m}^2$$

$$120,000\text{cm}^2 = \frac{1}{10,000} \times 120,000$$

$$= 12\text{m}^2$$

EXPRESSING SQUARE KILOMETRES (KM^2) AS SQUARE METRES (M^2)

$$1\text{KM} = 1000\text{M}$$

$$1\text{KM}^2 = 1000\text{M} \times 1000\text{M}$$

$$1\text{KM}^2 = 1,000,000\text{M}^2$$

Express 4Km^2 as M^2

$$1\text{KM}^2 = 1,000,000\text{M}^2$$

$$4\text{Km}^2 = 4 \times 1000000$$

$$= 4,000,000\text{m}^2$$

Change 2.5km^2 to m^2

$$1\text{KM}^2 = 10,000,000\text{m}^2$$

$$2.5\text{km}^2 = \frac{25}{10} \times 1,000,000$$

$$2,500,000\text{m}^2$$

EXPRESSING SQUARE METRES (M²) TO SQUARE KILOMETRES (KM²)

express 140000m^2 to km^2

$$1,000,000\text{m}^2 = 1\text{km}^2$$

$$140,000\text{m}^2 = \frac{140,000}{1,000,000}$$

$$= 0.14\text{km}^2$$

Mk Primary MTC bk 6 pg 317

Lesson 4 and 5 week one.

AREA AND PERIMETER

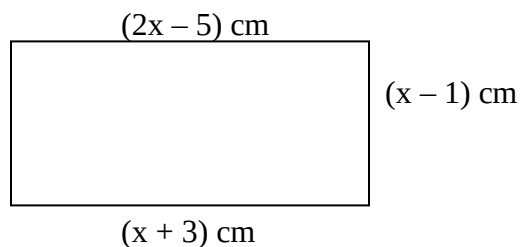
Revision: Area of square and rectangle

E.g The area of a rectangle is 56m^2 . The length is 8m. Find the perimeter.

2. The area of a square is 49dm^2 . Find its perimeter.
3. The perimeter of a rectangle is 40cm and its width is 8cm. Find its area.
4. The perimeter of a square is 24cm. Find its area.

Lesson 6 and 1 week one

FINDING SIDES, AREA AND PERIMETER



Find the value of x.

Opposite sides of rectangles are equal.

$$(2x-5) \text{ cm} = (x+3) \text{ cm}$$

$$\frac{(2x-5)\text{cm}}{\text{cm}} = \frac{(x+3)\text{cm}}{\text{cm}}$$

$$2x-5 = x+3$$

$$2x-5+5 = x+3+5$$

$$2x = x + 8$$

$$2x - x = x + 8$$

$$\underline{x = 8}$$

Find the length.

Width

$$(x + 3) \text{ cm}$$

$$(x - 1) \text{ cm}$$

$$(8 + 3) \text{ cm}$$

$$(8 - 1) \text{ cm}$$

$$11 \text{ cm}$$

$$7 \text{ cm}$$

Find its area

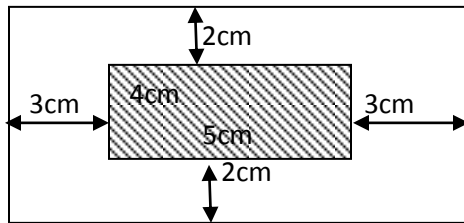
$$A = L \times W$$

$$11 \text{ cm} \times 7 \text{ cm}$$

$$A = \underline{77 \text{ cm}^2}$$

Lesson 2 and 3 week two.

SUBTRACTION OF AREA



Find the length and width of the outer rectangle.

Length

Width

$$= 3 \text{ cm} + 5 \text{ cm} + 3 \text{ cm}$$

$$4 \text{ cm} + 2 \text{ cm} + 2 \text{ cm}$$

$$11 \text{ cm}$$

$$8 \text{ cm}$$

b) Calculate the area of the unshaded part.

Area of the outer rectangle

Area of inner rectangle

$$A = L \times W$$

$$A = L \times W$$

$$11 \text{ cm} \times 8 \text{ cm}$$

$$5 \text{ cm} \times 4 \text{ cm}$$

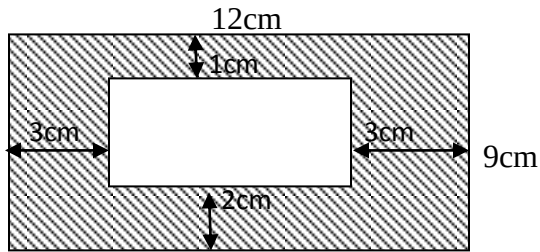
$$88 \text{ cm}^2$$

$$20 \text{ cm}^2$$

Area of the unshaded part = Area of the outer rectangle – Area of the inner rectangle

$$88\text{cm}^2 - 20\text{cm}^2$$

$$\underline{68\text{cm}^2}$$



Find the length and width of the inner rectangle.

Length

or

$$12\text{cm} - 3\text{cm} - 2\text{cm}$$

$$12\text{cm} - (3 + 2)\text{cm}$$

$$7\text{cm}$$

$$12\text{cm} - 5\text{cm} = 7\text{cm}$$

$$6\text{cm}$$

Find the area of the shaded part.

Area of outer rectangle

Area of outer rectangle

$$A = L \times W$$

$$A = L \times W$$

$$12\text{cm} \times 9\text{cm}$$

$$6\text{cm} \times 6\text{cm}$$

$$108\text{cm}$$

$$36\text{cm}$$

Area of under part

$$108\text{cm}^2$$

$$\underline{-36\text{cm}^2}$$

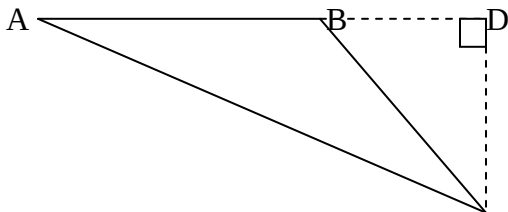
$$\underline{72\text{cm}^2}$$

MK Primary MTC bk 6 pg 336.

Lesson 4 and 5 week two

AREA OF A TRIANGLE

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$



C

$$BD = 4\text{cm}$$

$$\overline{AB} = 9\text{cm}$$

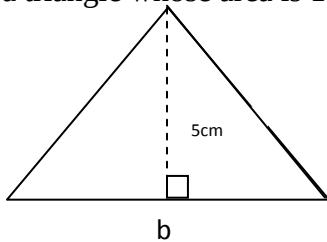
$$DC = 6\text{cm}$$

Find the area of triangle ABC

$$AB = 9\text{cm} - 4\text{cm} = 5\text{cm}$$

$$A = 15\text{ cm}^2.$$

Find the base of a triangle whose area is 15cm^2 and height 5cm.



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

$$\frac{1}{2} \times b \times 5\text{cm} = 15\text{cm}^2$$

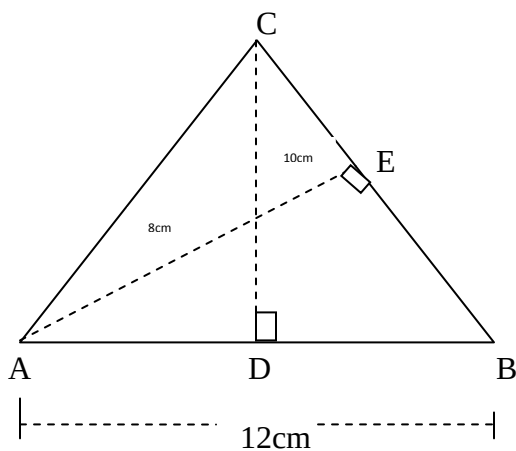
$$2 \times \frac{5}{2} = 15\text{cm}^2 \times 2$$

$$\frac{5}{5} = \frac{30\text{cm}}{5}$$

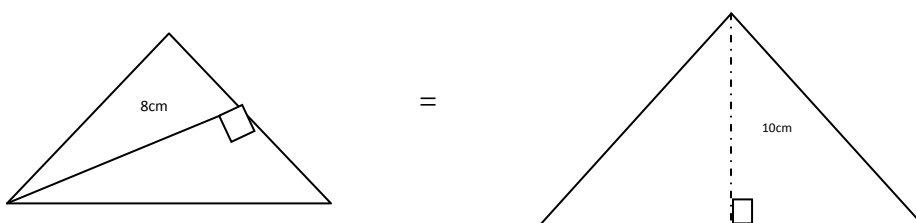
$$b = 6\text{cm}$$

FINDING THE BASE OR HEIGHT BY COMPARING AREA

Note: Different heights of the same triangle do not change the area of the triangle.



Find the length CB



12cm

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

$$\frac{1}{2} \times b \text{ cm} \times 8 \text{ cm} = \frac{1}{2} \times 12 \text{ cm} \times 10 \text{ cm}$$

$$4b \text{ cm} = 60 \text{ cm}^2$$

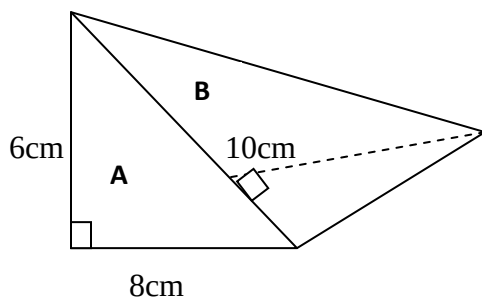
$$\frac{4 \text{ cm}}{4 \text{ cm}} = \frac{60 \text{ cm} \times \text{cm}}{4 \text{ cm}}$$

$$B = 15 \text{ cm}$$

$$= 15 \text{ cm}$$

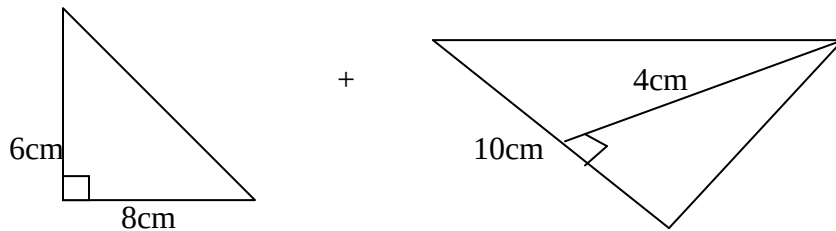
MK Primary MTC bk 6 pg 341.

FINDING THE AREA OF COMBINED SHAPES



Find the area of the figure

Area = Area of A + Area of B



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

$$\frac{1}{2} \times 8 \text{ cm} \times 6 \text{ cm} + \frac{1}{2} \times 10 \text{ cm} \times 4 \text{ cm}$$

$$24 \text{ cm}^2 + 20 \text{ cm}^2$$

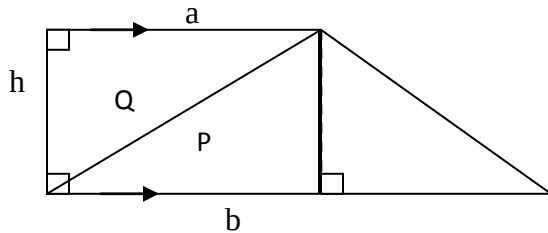
$$A = 44\text{cm}^2$$

MK Primary MTC bk 6 pg 343

Lesson 6 and 1 week two and three respectively.

AREA OF A TRAPEZIUM

A trapezium is a quadrilateral with one opposite side parallel. (Two sides are parallel)



Area of a trapezium = Area of triangle Q + area of triangle P.

Area of triangle Q = $\frac{1}{2}bh$ + Area of triangle P

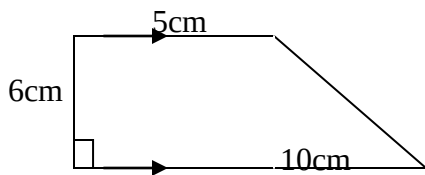
$$\frac{1}{2}ah = \frac{1}{2}bh$$

Area of a trapezium = $\frac{1}{2}ah + \frac{1}{2}bh$

Area of a trapezium = $\frac{1}{2}h(a + b)$

Where a and b are the parallel lines.

Example: Find the area of the figure



$$A = \frac{1}{2}h(a + b)$$

$$\frac{1}{2} \times 6\text{cm} (10\text{cm} + 5\text{cm})$$

$$\frac{1}{2} \times 6\text{cm} \times 15\text{cm}$$

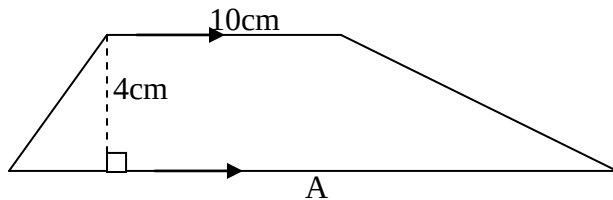
$$45\text{cm}^2$$

MK Primary MTC bk 6 pg 344.

FINDING ONE SIDE OF A TRAPEZIUM

The area of a trapezium is 60cm^2 , the height is 4cm and one of the parallel sides is 10cm .

Find the length of the second parallel line.



$$A = \frac{1}{2}h(a + b)$$

$$\frac{1}{2} \times 4\text{cm} (a + 10\text{cm}) = 60\text{cm}^2$$

$$2a\text{cm} + 2\text{cm} \times 10\text{cm} = 60\text{cm}^2$$

$$2a\text{cm}^2 + 20\text{cm}^2 = 60\text{cm}^2$$

$$2a\text{cm}^2 + 20\text{cm}^2 - 20\text{cm}^2 = 60\text{cm}^2 - 20\text{cm}^2$$

$$2a\text{cm} \div 2\text{cm} = 40\text{cm} \div 2\text{cm}$$

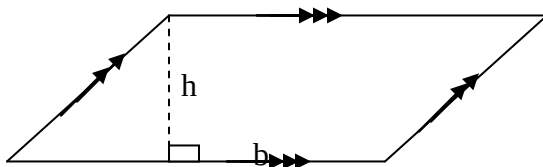
$$a = 20\text{cm}$$

MK Primary MTC bk 6 pg 346.

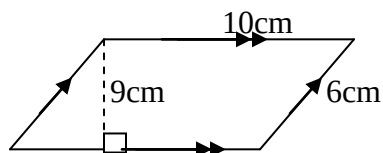
MK Primary MTC bk 7.

Lesson two and three week three.

AREA OF PARALLELOGRAM



Area of a parallelogram = base x height

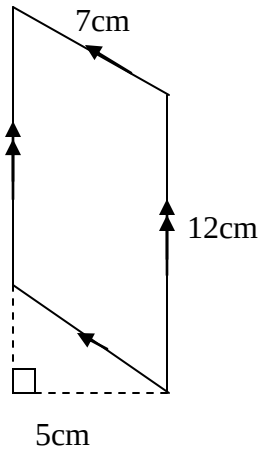


Find the area of the figure

$$A = b \times h$$

$$10\text{cm} \times 9\text{cm}$$

$$A = 90\text{cm}^2$$



Find the area of the figure.

$$A = b \times h$$

$$12\text{cm} \times 5\text{cm}$$

$$A = 60\text{cm}^2$$

MK Primary MTC bk 6 pg 347.

Revision Mathematics for upper Primary pg 79.

AREA OF A RHOMBUS

A rhombus is a quadrilateral with all sides equal, two opposite sides are parallel and two opposite angles are equal.

Area of a rhombus = $\frac{1}{2} \times d_1 \times d_2$

Example

1. Calculate the area of a rhombus whose diagonals are 12cm and 16cm.

$$\text{Area} = \frac{1}{2} \times d_1 \times d_2$$

$$= \frac{1}{2} \times 12\text{cm} \times 16\text{cm}$$

$$= 6\text{cm} \times 16\text{cm}$$

$$= 96\text{cm}^2$$

2. Study the rhombus below and use to answer the questions that follow

a) Calculate the area.

$$\text{Area} = \frac{1}{2} \times d_1 \times d_2$$

$$= \frac{1}{2} \times 18\text{dm} \times 20\text{dm}$$

$$= 180\text{dm}^2$$

Lesson four week three.

AREA OF A KITE

A kite is a quadrilateral made up of two isosceles triangles joined together.

$$\text{Area} = \frac{1}{2} \times d_1 \times d_2$$

Example

1. Work out the area of a kite whose diagonals are 9cm and 14cm.

$$\text{Area} = \frac{1}{2} \times d_1 \times d_2$$

$$= \frac{1}{2} \times 9\text{cm} \times 14\text{cm}$$

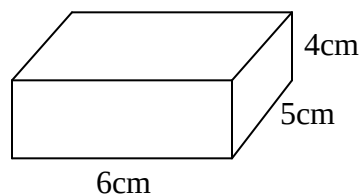
$$= 9\text{cm} \times 7\text{cm}$$

$$= 63\text{ cm}^2$$

Mk book 7 page , Fountain primary Mtcs Bk 7 page

Lesson 5 and 6 week three

TOTAL SURFACE AREA OF CUBOID AND CUBE



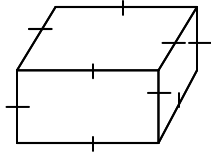
Find the total surface area.

$$\text{TSA} = 2 (L \times W) + 2 (L \times h) + 2 (L \times W)$$

$$2(6\text{cm} \times 5\text{cm}) + 2(6\text{cm} \times 4\text{cm}) + 2(5\text{cm} \times 4\text{cm})$$

$$\begin{aligned}
 &2 \times 30\text{cm}^2 + 2 \times 24\text{cm}^2 + 2 \times 20\text{cm}^2 \\
 &60\text{cm}^2 + 48\text{cm}^2 + 40\text{cm}^2 \\
 &148\text{cm}^2
 \end{aligned}$$

Find the total surface area of cube whose sides is 4cm.



A cube has all its face equal.

Each face is a square

Area of one face = $s \times s$

$$s^2$$

Area of the 6 faces = $6 \times s^2$

T.S.A of a cube = $6s^2$

Find the total surface area of a cube whose sides is 4cm.

$$\text{T.S.A} = 6s^2$$

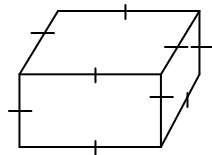
$$6 \times 4\text{cm} \times 4\text{cm}$$

$$6 \times 16\text{cm}^2$$

$$96\text{cm}^2$$

FINDING THE SIDES OF A CUBE WHEN GIVEN THE TOTAL SURFACE AREA

The total surface area of a cube is 384cm^2 . Find the length of each side of a square.



$$\text{T.S.A} = 6s^2$$

$$6 = 384\text{cm}^2$$

$$\frac{6s}{6} = \frac{384\text{cm}}{6}$$

$$\sqrt{6s} = \sqrt{64\text{cm}}$$

$$s = 8\text{cm}$$

Lesson 1 and 2 week four.

VOLUME

Volume is the amount of space occupied by an object.

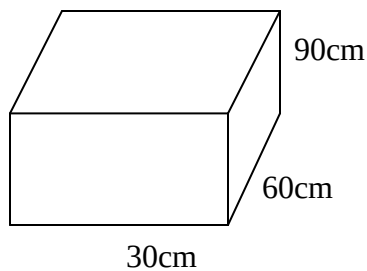
Volume is measured in cubic metric unit.

Revision: Volume of a cuboid and cube

FINDING VOLUME IN LITRES

A rectangular tank is 30cm by 60cm by 90cm.

Find its volume in litres.



$$V = L \times w \times h$$

$$30\text{cm} \times 60\text{cm} \times 90\text{cm}$$

$$1800\text{cm} \times 90\text{cm}$$

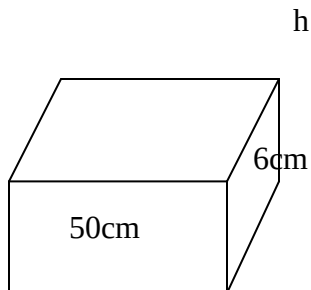
$$162000\text{cm}^3$$

$$1 \text{ litre} = 1000\text{cm}^3$$

$$162000\text{cm}^3 = \frac{162000}{1000}$$

$$= 162 \text{ litres}$$

The volume of a rectangle prism is 12 litres. Find its height.



$$V = L \times w \times h$$

$$5\text{cm} \times 6\text{cm} \times h = 12 \text{ litres}$$

$$\text{but } 1 \text{ litre} = 1000\text{cm}^3$$

$$12 \text{ litres} = 12 \times 1000\text{cm}^3$$

$$12000\text{cm}^3$$

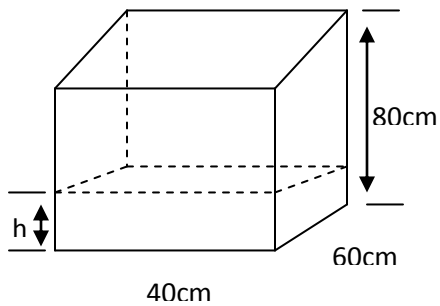
$$50\text{cm} \times 6\text{cm} \times h = 12000\text{cm}^3$$

$$3000\text{cm}^2 \times h = 12000\text{cm} \times \text{cm} \times \text{cm}$$

$$\frac{3000\text{cm} \times h}{3000\text{cm} \times \text{cm}} = \frac{12000\text{cm} \times \text{cm} \times \text{cm}}{3000\text{cm} \times \text{cm}} \quad h = 4\text{cm}$$

MORE ABOUT VOLUME

The tank is holding 72litres of water.



i) Calculate value of h.

$$1\text{litre} = 1000\text{cm}^3$$

$$72\text{litres} = 72 \times 1000\text{cm}^3$$

$$72000\text{cm}^3$$

$$L \times W \times h = V$$

$$40\text{cm} \times 60\text{cm} \times h = 72000\text{cm}^3$$

$$\frac{40\text{cm} \times 60\text{cm} \times h}{40\text{cm} \times 60\text{cm}} = \frac{72000\text{cm} \times \text{cm} \times \text{cm}}{40\text{cm} \times 60\text{cm}}$$

$$h = 30\text{cm}$$

ii) How many litres are needed to fill the tank?

The height of water needed to fill the tank

$$80\text{cm} - 30\text{cm} = 50\text{cm}$$

Volume of the water needed = $40\text{cm} \times 60\text{cm} \times 50\text{cm}$

$$2400\text{cm}^2 \times 50\text{cm}$$

$$120000\text{cm}^3$$

$$1000\text{cm}^3 = 1\text{litre}$$

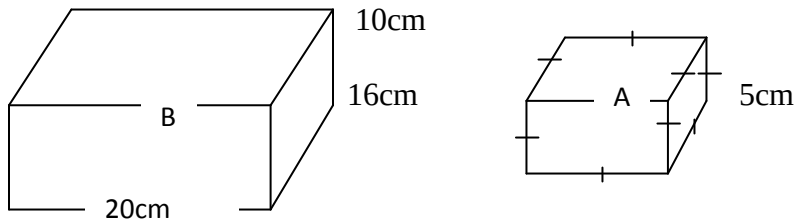
$$120000\text{cm}^3 = \frac{120000\text{cm}}{1000}$$

$$= 120\text{litres}$$

Lesson 3 and 4 week four.

PACKING CUBES AND CUBOIDS

How many cubes of type A can be packed in box B?



$$\begin{aligned}\text{No. of cubes along the length} &= \frac{\text{length of } B}{\text{length of } A} \\ &= \frac{20\text{cm}}{5\text{cm}} \\ &= \underline{\underline{4 \text{ cubes}}}\end{aligned}$$

$$\begin{aligned}\text{No of cubes along the width} &= \frac{\text{width of } B}{\text{Width of } A} \\ &= \frac{16\text{cm}}{5\text{cm}} \\ &= \underline{\underline{3 \text{ cubes}}}\end{aligned}$$

$$\begin{aligned}\text{No of cubes along the height} &= \frac{\text{height } B}{\text{height of } A} \\ &= \frac{10\text{cm}}{5\text{cm}} \\ &= \underline{\underline{2 \text{ cubes}}}\end{aligned}$$

$$\begin{aligned}\text{No of cubes} &= 4 \text{ cubes} \times 3 \text{ cubes} \times 2 \\ &= \underline{\underline{24 \text{ cubes}}}\end{aligned}$$

b) How many cubes will be packed on the 1st layer?

No of cubes along the length x No of cubes along the width.

$$5 \text{ cubes} \times 3 \text{ cubes} \quad 4 \text{ cubes} \times 3 \text{ cubes}$$

$$20 \text{ cubes} = 12 \text{ cubes}$$

c) How many layers will be there?

$$\text{No of layers} = \frac{\text{Height of B}}{\text{Height of A}}$$

$$\frac{10 \text{ cm}}{5 \text{ cm}}$$

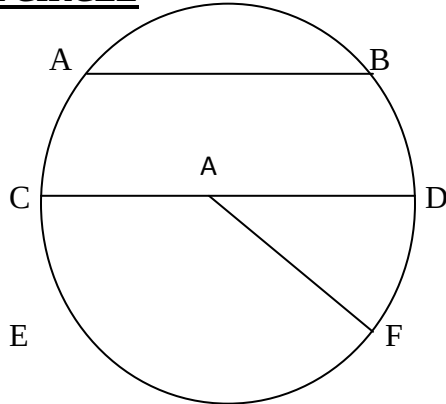
$$= 2 \text{ layers}$$

Lesson 5 and 6 week four

CIRCUMFERENCE

CIRCLE

PARTS OF A CIRCLE



AB = Chord

CD = Diameter

CA = Radius

AD = Radius

AF = Radius

AE = Radius

EAF = Sector

Diameter is the longest distance.

Circumference is the distance round a circular object.

Diameter is a line that passes through the centre and touches on the circumference.

Radius is any line drawn from the centre to the circumference.

Radius is half a diameter.

$$\text{Radius} = \text{Diameter} \div 2$$

$$\text{Diameter} = 2 \times \text{radius or radius} \times 2$$

FINDING THE RADIUS WHEN GIVEN THE DIAMETER

The diameter of a circle is 14cm. find its radius.

$$\begin{aligned}\text{Radius} &= \frac{\text{Diameter}}{2} \\ &= \frac{14\text{cm}}{2}\end{aligned}$$

$$R = 7\text{cm}$$

The diameter of a circle is 17cm. find its radius.

$$\begin{aligned}\text{Radius} &= \frac{\text{Diameter}}{2} \\ &= \frac{17\text{cm}}{2}\end{aligned}$$

$$= 8\frac{1}{2} \text{ or } 8.5\text{cm}$$

FINDING THE DIAMETER OF A CIRCLE WHEN GIVEN RADIUS

The radius of a circle is 14cm. find its diameter.

$$\text{Diameter} = \text{radius} \times 2$$

$$14\text{cm} \times 2$$

$$28\text{cm}.$$

Find the diameter of a circle whose radius is 3.7dm.

$$\text{Diameter} = 2 \times \text{radius}$$

$$2 \times 3.7\text{dm}$$

$$7.4\text{dm}$$

CIRCUMFERENCE OF A CIRCLE

Note: $\frac{\text{Circumference}}{\text{Diameter}} = P_i$

$$\text{Circumference} = \pi \times \text{diameter}$$

$$\pi d \text{ or } 2\pi r$$

$$\pi = \frac{22}{7} \text{ or } 3.14 \text{ or } 3\frac{1}{7}$$

Find the circumference of a circle whose diameter is 14cm.

$$C = \pi d$$

$$\frac{22}{7} \times 14\text{cm}$$

$$22 \times 2\text{cm}$$

$$C = 44\text{cm}$$

Find the circumference of a circle whose radius is 14cm.

$$C = \pi d \text{ or } 2\pi r$$

$$2 \times \frac{22}{7} \times 14\text{cm}$$

$$C = 88\text{cm}$$

Find the circumference of a circle whose radius is 20cm.

MK Primary MTC bk 6 pg 328.

Functional Primary MTC for Uganda bk 6 pg 268.

Lesson 1 and 2 week five

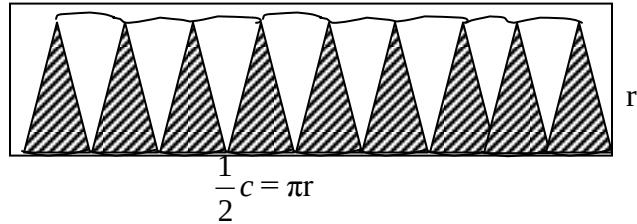
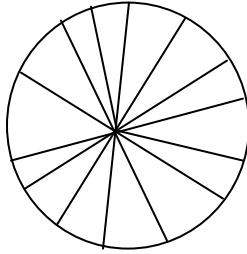
AREA OF A CIRCLE

Proving that area of a circle =

Procedure

- i) Get a rectangle piece of paper.

- ii) Fold it in halves.
- iii) Then in quarters.
- iv) Keep O the centre and fold the shorter lining on to the longer living three times and each time cutting off the parts that are not covered. Unfold the paper. You will get a circle. Then arrange them in form of rectangle.



Area of a rectangle = L x W

$$\text{Area of a circle} = \frac{1}{2}c \times r$$

$$= \frac{1}{2} \times 2\pi r \times r$$

$$= \pi r \times r$$

$$= \pi r^2$$

$$\text{Area} = \pi r^2$$

Find the area of a circle whose radius is 7cm.

$$A = \pi r^2$$

$$\frac{22}{7} \times 7\text{cm} \times 7\text{cm}$$

$$22 \times 7\text{cm}^2$$

$$154\text{cm}^2$$

Find the area of a circle where radius is 5cm.

$$\text{Area} = \pi r^2$$

$$3.14 \times 5\text{cm} \times 5\text{cm}$$

$$314$$

$$3.14 \times 25$$

$$\underline{\times 25}$$

$$78.50$$

$$1570$$

$$78.50\text{cm}^2$$

$$\underline{\times 28} = 7850$$

INTEGERS

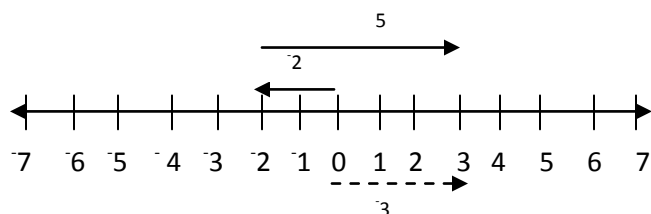
Integers are made up of negative, positive numbers and zero.

Revision: Arrows on the numbers

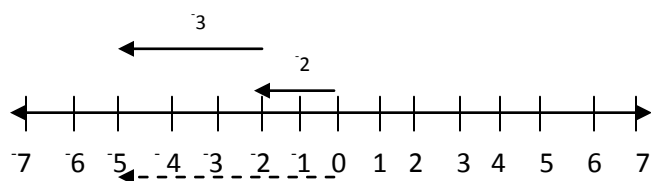
Ordering integers

ADDITION OF INTEGERS ON NUMBERLINE

Add $-2 + 5$



$-2 + -3$



ADDING INTEGERS WITHOUT A NUMBERLINE

$$5 + -3$$

Pos.

(+)

(+)

(+)

+

+

Neg

(-)

(-)

(-)

$$5 + -3 = 2$$

$$^{-}6 + 4$$

Neg

Pos.

(-)

(+)

(-)

(+)

(-)

(+)

-

-

$$^{-}6 + 4 = ^{-}2$$

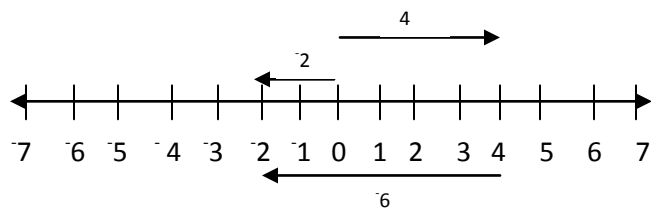
MK Primary MTC bk 6.

Understanding MTC bk 6 pg 164.

Functional Primary MTC bk 6 pg 167

SUBTRACTION OF INTEGERS

$$^{-}2 - 4$$

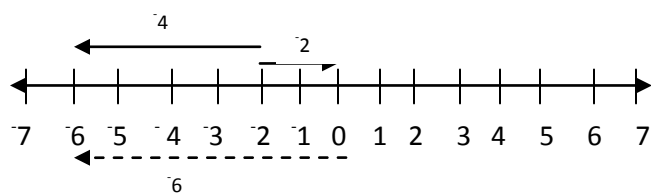


$$^{-}2 - 4 = ^{-}6$$

Or

$$^{-}2 - 4$$

$$^{-}2 + ^{-}4$$



$$^{-}2 + ^{-}4 = ^{-}6$$

SUBTRACTION OF INTEGERS WITHOUT A NUMBERLINE

Subtract inter is the same as adding the opposite of the second integer to the first.

$$7 - ^{-}5 = 7 + ^{+}5$$

$$= 12$$

$$^{-}9 - 2 = ^{-}9 + ^{-}2$$

$$= 11$$

$$2 - 3 = 2 + ^{-}3$$

$$= ^{-}11$$

$$^{-}6 - ^{-}4 = ^{-}6 + 4$$

$$= ^{-}2$$

MK Primary MTC bk 6 pg 201

Understanding MTC bk 6 pg 168

Functional Primary MTC bk 6 pg 170.

Lesson 6 week 5 and lesson 1 week 6

MULTIPLICATION OF INTEGERS

Positive x Positive = Positive

Positive x Negative = Negative

Negative x Negative = Positive

$$6 \times ^{+}2 = ^{+}12$$

$$^{-}4 \times ^{-}2 = ^{+}8$$

$$7 \times ^{-}5 = ^{-}35$$

DIVISION OF INTEGERS

Positive ÷ Positive = Positive

Negative ÷ Positive = Negative

Positive ÷ Negative = Negative

Negative ÷ Negative = Positive

$$16 \div 4 = 4 \quad ^{-}12 \div 3 = ^{-}4$$

$$12 \div ^{-}3 = ^{-}4$$

$$^{-}12 \div ^{-}3 = 4$$

Lesson 2 and 3 week 6

APPLICATION OF INTEGERS.

Examples

1. The temperature of a place was 36°C but fell by 12°C . What was the new temperature of the place?

$$\begin{aligned}\text{Solution: new temperature} &= 36^{\circ}\text{C} - 12^{\circ}\text{C} \\ &= 24^{\circ}\text{C}\end{aligned}$$

2. A taxi leaves town A with 14 passengers town B, at B 9 passengers get out and 6 other passengers board and the taxi continues to town C. How many passengers reach town C?

$$\begin{aligned}\text{Solution: } 14 - 9 + 6 \\ &= 5 + 6 \\ &= 11 \text{ passengers.}\end{aligned}$$

Lesson 4, 5 and 6 week 6

APPLICATION OF FINITE SYSTEMS.

EXAMPLES

1. If today is Tuesday what day of the week will be it after 38 days?

Solution: S M T W T F S

0 1 2 3 4 5 6

Day + no of days = (finite7)

2 + 38 = (Finite7)

$40 \div 7 = 5 \text{ remainder } 5$

The remainder is 5 so the day will be Friday.

2. If today is Wednesday what day of the week was 47 days ago?

Solution: day - no of days = (Finite 7)

3 - 47 = (Finite 7)

$47 \div 7 = 6 \text{ rem } 5$

3 - 5 = (Finite 7)

$$(3+7) - 5 = \dots \text{ (Finite 7)}$$

$$10 - 5 = 5 \text{ (finite 7) the day was Friday 47 days ago.}$$

3. It is September now, what month of the year will it be 38 months from now?

Solution: month + no. of months = ... (Finite 12)

$$9 + 38 = \dots \text{ (Finite 12)}$$

$$47 \div 12 = 3 \text{ rem } 11$$

The month of the year will be November