



EL-MORSSER

Maths

By a group of supervisors

FREE PART 1

Worksheets & Examinations



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6th Primary
FIRST TERM

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Preface

Thanks to God who helped us to introduce one of our famous series "El-Moasser" in mathematics.

We introduce this book to our colleagues.

We also introduce it to our students to help them study mathematics.

In fact , this book is the outcome of more than thirty years experience in the field of teaching mathematics.

This book will make students aware of all types of questions.

We would like to know your opinions about the book hoping that it will win your admiration.

We will be grateful if you send us your recommendations and your comments.

The Authors



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- Worksheets.
- Summary of the first term.
- Final Examinations.



WORKSHEETS

First

Worksheets on unit ① and unit ②

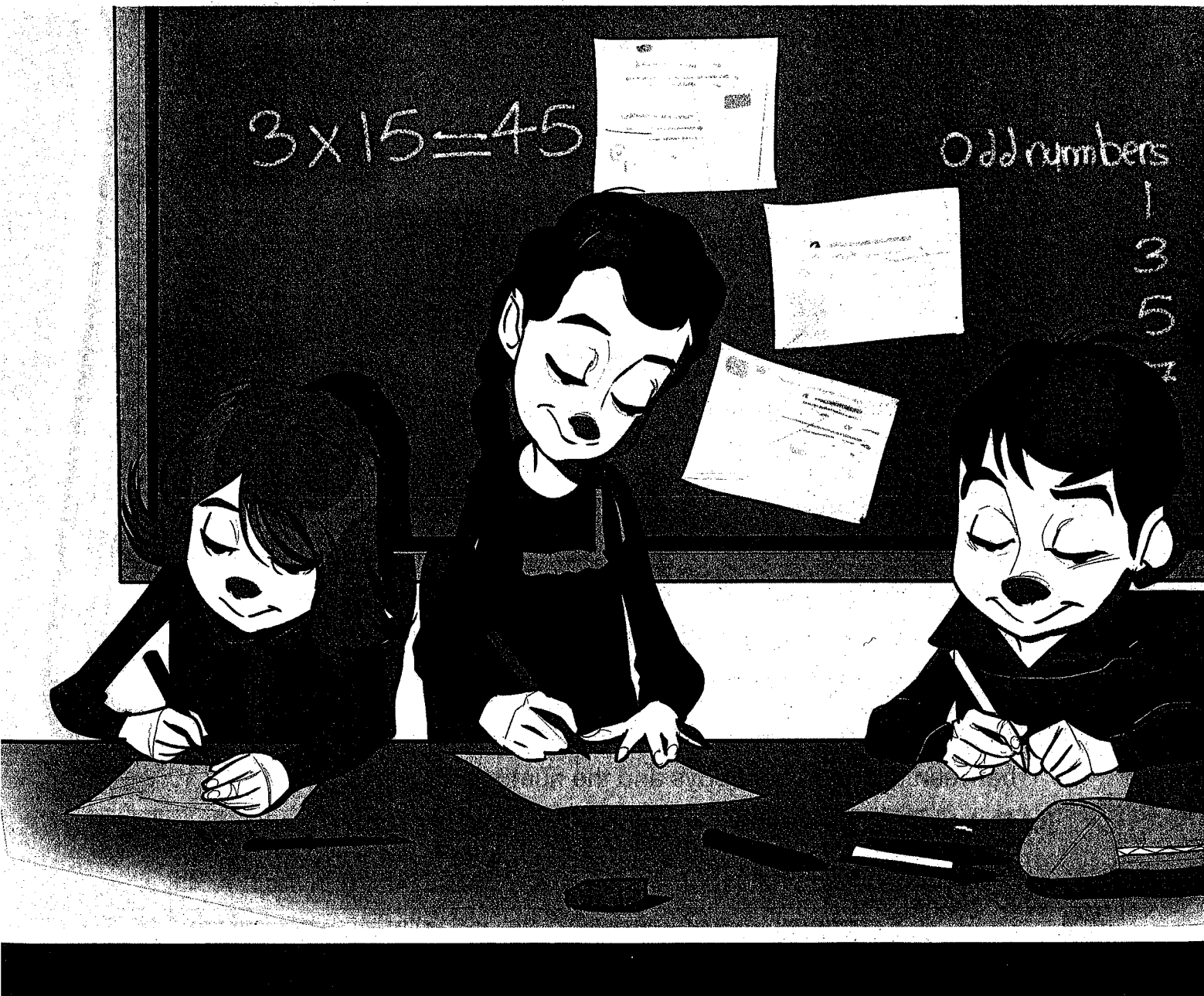
Second

Worksheets on unit ③ and unit ④

First

Worksheets

on unit ① and unit ②



1 Choose the correct answer between brackets :

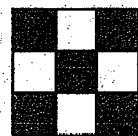
- [a] $50 : 300 = \dots\dots\dots$ ($2 : 5$ or $\frac{1}{5}$ or $1 : 6$ or $\frac{1}{10}$)
- [b] $\frac{3}{5} : \frac{5}{8} = \dots\dots\dots : 25$ (24 or 27 or 15 or 40)
- [c] $5.5 : 22 = \dots\dots\dots : \dots\dots\dots$ ($5 : 2$ or $4 : 1$ or $1 : 4$ or $2 : 5$)
- [d] $1.5 : 2.5 = \dots\dots\dots$ ($5 : 3$ or $\frac{3}{5}$ or $3 : 25$ or $\frac{5}{9}$)
- [e] The ratio between the length of a side of a square and its perimeter
= $\dots\dots\dots : \dots\dots\dots$ ($1 : 1$ or $4 : 1$ or $1 : 4$ or $1 : 16$)

2 Complete each of the following :

- [a] The ratio is $\dots\dots\dots$
- [b] In the ratio $\frac{9}{17}$, the first term is $\dots\dots\dots$ and the second term is $\dots\dots\dots$
- [c] The radius length of a circle : the circumference of the
circle = $\dots\dots\dots : \dots\dots\dots$
- [d] $\frac{2}{3} : 3\frac{1}{3} = \dots\dots\dots : \dots\dots\dots$ (in the simplest form)
- [e] The ratio between the perimeter of an equilateral triangle and its
side length is $\dots\dots\dots : \dots\dots\dots$

3 In the opposite figure :

Find the ratio between :



- [a] The number of coloured squares and the number of all squares.
- [b] The number of uncoloured squares and the number of coloured squares.
- [c] The number of all squares and the number of uncoloured squares.

4 [a] A school has 200 pupils , if 80 pupils of them are girls , find the ratio
between the number of boys and the number of girls.

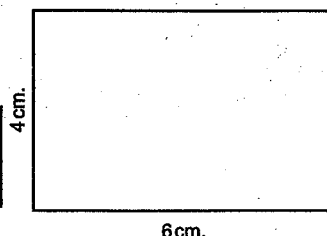
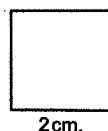
[b] Put each of the following ratios in its simplest form :

- (1) $5 : \frac{5}{4}$ (2) $2\frac{2}{3} : 1\frac{1}{3}$ (3) $\frac{1}{3} : 0.2$ (4) $\frac{15}{45}$

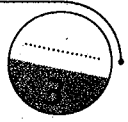
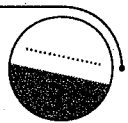
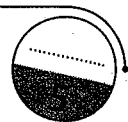
5 In the opposite figure :

Find the ratio between :

- [a] The perimeter of the square
and the perimeter of the rectangle.



- [b] The area of the square and the area of the rectangle.



1 Complete each of the following :

[a] $\frac{1}{4}$ hour : 20 minutes = : (in the simplest form)

[b] $4.5 : 9 = \dots\dots\dots : \dots\dots\dots$

[c] P.T. 50 : L.E. $1\frac{1}{2} = \dots\dots\dots : \dots\dots\dots$ (in the simplest form)

[d] The ratio between the lengths of two sides of a square is :

[e] 2 m. : 400 cm. = 1 :

2 Choose the correct answer between brackets :

[a] The diameter length of the circle : its circumference =

($1 : 2\pi$ or $1 : \pi$ or $\pi : 1$ or $2\pi : 1$)

[b] $\frac{1}{8}$ kg. : 100 gm. = ($4 : 5$ or $5 : 2$ or $8 : 15$ or $5 : 4$)

[c] 16 kirats : 1 feddan = :

($16 : 1$ or $2 : 3$ or $3 : 2$ or $8 : 3$)

[d] $\frac{2}{3} : \frac{3}{4} = \dots\dots\dots : \dots\dots\dots$ (in the simplest form)

($8 : 9$ or $2 : 3$ or $2 : 4$ or $8 : 7$)

[e] 18 hours : one day = :

($2 : 9$ or $1 : 3$ or $3 : 4$ or $4 : 3$)

3 Find each of the following ratios in its simplest form :

[a] 6 days : 2 weeks

[b] 5 dm. : 5 m.

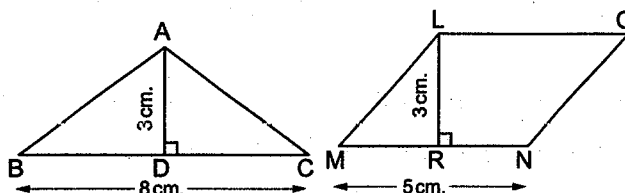
[c] 5 kg. : 7 000 gm.

[d] $\frac{1}{2}$ L. : 250 mL.

4 The distance between Adel's house and the sport's club which he joins is 350 metres and the distance between his house and his school is 1.4 kilometres. What is the ratio between the two distances ?

5 In the opposite figure :

Find the ratio between the area of the triangle ABC and the area of the parallelogram LMNO



1 Complete :

[a] If the ratio between Tamer's height and Hend's height is 9 : 8 and the difference between their heights is 20 cm. , then the height of Hend is cm.

[b] The ratio between two numbers =

[c] P.T. 750 : L.E. 10 = :

[d] A rectangle of perimeter 42 cm. and the ratio between its length and its width is 5 : 2 , then its length is cm. and its width is cm.

[e] 300 gm. : $1\frac{1}{2}$ kg. = : (in the simplest form)

2 If the ratio between the number of boys and the number of girls in a class is 2 : 3 , if the number of boys is 12 , find the number of girls.

3 Choose the correct answer between brackets :

[a] Two wires , the ratio between their lengths is 3 : 4 and the length of the first wire is 75 cm. , then the length of the second wire is m. (1 or 100 or 10)

[b] If the area of a rectangle is 40 cm^2 . and its length is 0.8 dm. , then the ratio between its length and width = : (5 : 8 or 8 : 5 or 5 : 1)

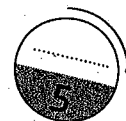
[c] The ratio between what Yassmien and Marwa has is 3 : 5 , if Marwa has 40 pounds , then Yassmien has pounds. (30 or 15 or 24)

[d] The ratio 12 : 18 in its simplest form by dividing both terms by (2 or 3 or 6)

[e] If the sum of two numbers is 40 and the ratio between them is 3 : 5 , then the smaller one = (8 or 15 or 25)

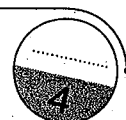
4 If the sum of two amounts of money is L.E. 1800 and the ratio between the two amounts is 2 : 7 , find each of the two amounts.

5 The ratio between the length and the width of a rectangle is 7 : 4 , if the width is less than the length by 21 cm. , then find the area of the rectangle.

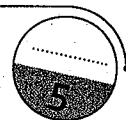


1 Complete each of the following :

- [a] $12 : 18 : 30 = \dots : \dots : \dots$ (in the simplest form)
 [b] $2.5 : 5 : 3.5 = \dots : \dots : \dots$ (in the simplest form)
 [c] $0.5 \text{ km.} : 700 \text{ m.} : 900 \text{ m.} = \dots : \dots : \dots$ (in the simplest form)
 [d] If $a : b = 3 : 5$ and $b : c = 2 : 5$, then $a : b : c = \dots : \dots : \dots$
 [e] The ratio between the side length of a rhombus and its perimeter
 = $\dots : \dots$

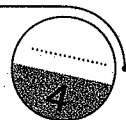


- 2 [a] If the ratio between the measures of the angles of a triangle is $3 : 4 : 5$ Find the measure of each angle of the triangle.
 [b] The ratio between two numbers is $5 : 6$, if their sum is 297 Find the two numbers.



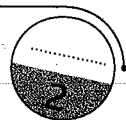
3 Choose the correct answer between brackets :

- [a] If $a : b = 5 : 6$ and $b : c = 3 : 4$, then $a : c = \dots : \dots$
 ($3 : 5$ or $5 : 3$ or $5 : 8$ or $8 : 5$)
 [b] $\frac{1}{2} : \frac{1}{3} : \frac{1}{4} = \dots : \dots : \dots$
 ($2 : 3 : 4$ or $4 : 3 : 2$ or $6 : 4 : 3$ or $3 : 4 : 2$)
 [c] 400 piastres : 12 pounds = $\dots : \dots$
 ($1 : 3$ or $3 : 1$ or $1 : 4$ or $2 : 3$)
 [d] The ratio between three numbers is $3 : 4 : 7$ and their sum is 70 ,
 then the greatest number is \dots (15 or 35 or 20 or 14)
 [e] $16 : 48 = \frac{1}{\dots}$ (2 or 4 or 5 or 3)



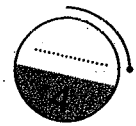
- 4 [a] A piece of land in the form of a triangle , the ratio between its side lengths is $4 : 6 : 7$, if the perimeter of this land equals 51 m. Find the lengths of its sides.

- [b] If the ratio between Adam's money : Nada's money : Seif's money is $6 : 5 : 2$, and the difference between Adam's money and Seif's money is L.E. 200 Find the money of each one of them.



- 5 If L.E. 988 is divided among Mohamed, Hany and Amr such that the share of Mohamed is $\frac{1}{2}$ of that of Hany and the share of Hany is $\frac{3}{2}$ of that of Amr. Find the share of each of them.

1 Choose the correct answer between brackets :



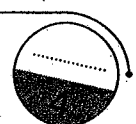
[a] A tractor ploughs 14 feddans in 3.5 hours , then the rate of performance of the tractor = feddans/hour. ($\frac{1}{4}$ or 4 or 10.5 or 7)

[b] A factory produces 4 000 cans for juice during 8 hours , then the rate of the production is cans/hour
(32 000 or 500 or 5 000 or 4 008)

[c] A machine produces 500 m. of material in 2 hours and half , then the rate of the production of this machine is m./hour.
(400 or 125 or 1 000 or 200)

[d] If Omar drinks 14 glasses of milk weekly , then the rate of what he drinks daily is glasses. (3 or 7 or 14 or 2)

2 [a] If a car covers 270 km. in three hours , find the average speed of the car through this trip.



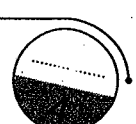
[b] The number of pupils in the sixth grade in a school is 260 , the ratio between the number of boys to the number of girls is 6 : 7
Find the number of each of boys and girls in this grade.

3 [a] If the ratio between Bassem's share : Mina's share : Amgad's share is 3 : 4 : 5 and the share of Bassem is L.E. 24
Calculate the share of each of Mina and Amgad.



[b] A factory produces 200 bottles of juice in 10 hours.
Calculate the production rate of the factory.

4 [a] A machine produces 450 kg. of metal in 3 hours. Calculate the rate of production of the machine.



[b] If a worker paints a wall of area 45 m^2 in 5 hours , what is the rate of his work ? and how many square metres does the same worker paint in 7 hours ?

5 [a] The ratio between the heights of two buildings is 3 : 7 , if the second building is 35 m. high. Find the height of the first building.



[b] A car consumes 160 litres of petrol to cover a distance of 240 km.
Find the rate of consumption petrol of that car.

1 Complete each of the following :

[a] The proportion is

[b] $\frac{7}{12} = \frac{28}{\dots\dots\dots} = \frac{\dots\dots\dots}{36}$

[c] $\frac{8}{\dots\dots\dots} = \frac{1}{3} = \frac{\dots\dots\dots}{15}$

[d] $\frac{\dots\dots\dots}{6} = \frac{12}{18} = \frac{6}{\dots\dots\dots} = \frac{\dots\dots\dots}{3}$

[e] 150 gm. : $\frac{1}{4}$ kg. = :

2 A car consumes 12 litres of petrol in 150 km.

Complete the following proportion table :

Petrol in litre	12	.....	36
Distance in km.	150	100	.....

3 Complete the following table to make the corresponding numbers in the two rows proportional :

1.3	.....	1	3	.....	5.5	.....
.....	5	10	.....	45	.....	6.7

4 The number of pupils in a primary school is 400 pupils , if the number of girls is 250 , find :

[a] The ratio between the number of girls and the number of boys.

[b] The ratio between the number of boys and the number of all pupils.

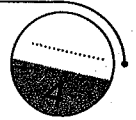
5 A machine produces 16 units from a certain product in 4 hours , what is the rate of the machine ? then how long does this machine take to produce 25 units ?

1 Complete :



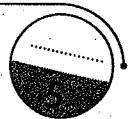
- [a] The product of the extremes = the product of
- [b] The fourth proportional term in 3 , 6 and 12 is
- [c] If 3 , x , 12 and 16 are proportional numbers , then $x = \dots\dots\dots$ and it is called the term.
- [d] If $\frac{5}{9} = \frac{15}{x}$, then $x = \dots\dots\dots$
- [e] If $\frac{a}{b} = \frac{x}{y}$, then $a \times y = \dots\dots\dots \times \dots\dots\dots$

2 Complete the missing number in each of the following proportions :



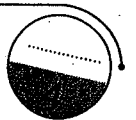
- [a] 2 , 11 , 8 , [b] 5 , 8 , , 24
- [c] 9 , , 4.5 , 4 [d] , 7 , 24 , 56

3 Choose the correct answer :



- [a] If $\frac{a+6}{20} = \frac{1}{2}$, then $a = \dots\dots\dots$ (6 or 4 or 3 or 10)
- [b] If the numbers 2 , 3 , 4 and x are proportional , then the value of $x = \dots\dots\dots$ (5 or 6 or 7 or 8)
- [c] $\frac{2}{5} = \frac{\dots\dots\dots}{17.5}$ (35 or 10 or 7 or 2.5)
- [d] 18 hours : one day = (18 : 1 or 4 : 3 or 3 : 4 or 2 : 3)
- [e] If $3a = 4b$, then $\frac{a}{b} = \dots\dots\dots$ ($\frac{3}{4}$ or $\frac{2}{3}$ or $\frac{4}{3}$ or $\frac{3}{2}$)

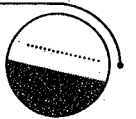
4 [a] A car consumes 20 litres of fuel to cover a distance of 180 km.



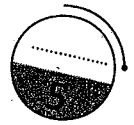
How many litres are needed to cover 540 km.

- [b] If the ratio among the heights of three buildings is 3 : 4 : 5 , the height of the first building is 21 m. Calculate the height of the second and the third buildings.

5 A machine produces 1 400 m. of textile in two hours.



Calculate the needed time to produce 4 900 m. of textile.



1 Complete :

[a] The drawing scale = $\frac{\dots\dots\dots}{\dots\dots\dots}$

[b] If the drawing scale is 1 : 300 , and the length in drawing is 2 cm. ,
then the length in reality = $\dots\dots\dots$ metres.

[c] If the drawing length of an object is 3 cm. and its real length is 30 metres ,
then the drawing scale is $\dots\dots\dots$

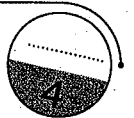
[d] The ratio $\frac{5}{13}$, its first term is $\dots\dots\dots$ and its second term is $\dots\dots\dots$

[e] If the drawing scale is less than 1 , then it refers to $\dots\dots\dots$

2 [a] The distance between two cities is 20 km. , if the distance between
them on a map is 4 cm.

Find the drawing scale of this map and what does it mean ?

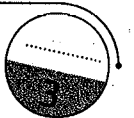
[b] The real length of an insect is 0.4 mm. and its length under
a microscope is 2 cm. , find the ratio of magnification.



3 Cairo tower is one of the tourists places of Cairo , its height is 187.2 m. ,
if its height in a picture is 13 cm.

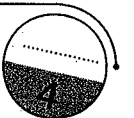
[a] Find the drawing scale.

[b] If the length of a neighboured building in the same picture is 3.5 cm.
Find its real length.



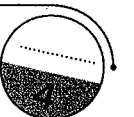
4 [a] The ratio of the production of three factories for TV sets is 3 : 2 : 1 ,
if the sum of their production is 9 600
Find the production of each one.

[b] An engineer drew a map of a rectangular garden with a scale 1 : 3 000
Find the real area of this garden if its dimensions on the map are
3.6 cm. and 2 cm.



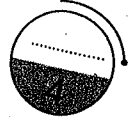
5 [a] The real distance between Cairo and Alexandria is 220 km. , find the
distance between them on a map drawn with a scale 1 : 500 000

[b] A magnified picture of an insect was photographed by a scale 200 : 1
Find the length of the insect in the picture if its real length is 0.14 mm.

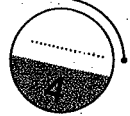


1 [a] Distribute L.E. 360 among three persons in the ratio 5 : 3 : 4

[b] The difference between two numbers is 12 and the ratio between them is 5 : 7 Find the two numbers.



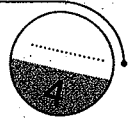
2 Three persons participated in a commercial , the first paid L.E. 15 000 , the second paid L.E. 25 000 and the third paid L.E. 20 000
At the end of the year , the profit was L.E. 5 520
Find the share of each of them.



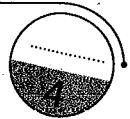
3 [a] A map is drawn with a scale 1 : 1 000 000 Find the real distance between El-Fayoum and Beni Suef in kilometres if the map distance is 5 cm.

[b] If the ratio of the production of 3 factories for a certain type of washing machines is 5 : 4 : 3 , and the production of the third factory is 3 600 washing machines.

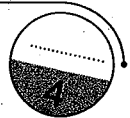
Find the production of the first and the second factories.



4 A load of apple weighs 330 kg. is distributed among three merchants in which the share of first = $\frac{2}{3}$ the share of the second , and the share of the second = $\frac{1}{2}$ the share of the third , calculate the share of each of them from this load.



5 A man died leaving 192 feddans of land to be distributed among his wife , 2 sons and 3 daughters , the share of the wife is $\frac{1}{8}$ of the whole land , and the share of the son is twice that of the daughter.
Find the share of the wife and the share of each son and daughter.



1 Complete :

[a] The percentage is

[b] $\frac{6}{25} = \dots\dots\dots \%$

[c] $1\frac{3}{4} = \dots\dots\dots \%$

[d] $70\% = \dots\dots\dots$ (in a fractional form)

[e] $1 - (35\% + 20\%) = \dots\dots\dots \%$



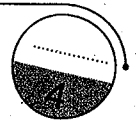
2 Convert each of the following into a percentage :

[a] 0.07

[b] $\frac{3}{5}$

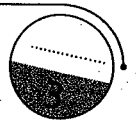
[c] $\frac{9}{20}$

[d] 0.6



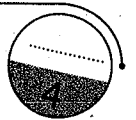
3 If $\frac{x}{40} = 35\%$,

find the value of x



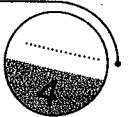
4 [a] In a class , there are 48 pupils , if 6 of them are absent.

Find the percentage of absentees and also the percentage of attendance.



[b] An amount of money was distributed among Heba , Hend and Nada in the ratio $2 : 3 : 4$, if Nada's share is L.E.15 more than Heba's share. Find the total amount of the money.

5 [a] The monthly salary of an employee is L.E. 936 He saved L.E. 117 Find the percentage of what he saved to its salary.



[b] The real distance between Cairo and Banha is 40 km. and the distance between them on the map is 8 cm. Find the drawing scale for this map.

1 Choose the correct answer between brackets :

[a] $50\% + \frac{1}{5} = \dots\dots\dots\%$ (55 or 70 or 45 or 10)

[b] If 9 , x , 24 and 32 are proportional quantities , then $x = \dots\dots\dots$
(12 or 15 or 3 or 6)

[c] 45 % of 300 pounds = $\dots\dots\dots$ pounds
(45 or 35 or 150 or 135)

[d] If a merchant bought a TV set for L.E. 1 000 , then sold it for
L.E. 1 200 , then the percentage of profit is $\dots\dots\dots\%$
(20 or 30 or 15 or 45)

[e] Khaled bought a car in the price L.E. 60 000 and he sold it with
profit 5 % , then the selling price of the car is L.E. $\dots\dots\dots$
(61 000 or 62 000 or 63 000 or 65 000)

2 [a] A trader sold goods for L.E. 550 with a profit of 10 %

Find the cost price of the goods.

[b] A piece of cloth of 10 metres long is put in water , it shrank by 5 %
from its original length. Find its length after shrinking.

3 [a] The length of a road is 120 km. , it is wanted to pave the road in three
months. If 42 % in the first month and 28 % in the second month.
How many kilometres will be paved in the third month ?

[b] Ramy deposited L.E. 3 000 in a bank with an interest 11 %
Find the total amount after one year.

4 [a] The price of a TV set is L.E. 1 450 , in the sale , its price becomes
L.E. 1 160 Find the percentage of the discount.

[b] XYZ is a triangle in which $XY : YZ : ZX = 4 : 5 : 7$
and $ZX = 28$ cm. Find the perimeter of the triangle.

5 A trader bought some goods for L.E. 960 and spent L.E. 20
for transportation , then he sold it with profit 20 %
Find the selling price.

Second

Worksheets

on unit ③ and unit ④



1 Complete each of the following :

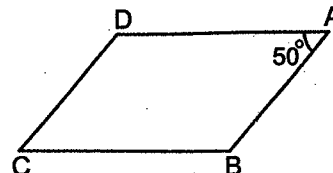
[a] The two diagonals are equal in length in and

[b] In the opposite figure :

ABCD is a parallelogram

, $m(\angle A) = 50^\circ$

, then $m(\angle B) = \dots\dots\dots^\circ$



[c] The rhombus is a parallelogram in which two adjacent sides are

[d] A parallelogram in which its diagonals are equal in length is called

[e] The shape that the two diagonals are perpendicular and equal in length is

2 In the opposite figure :

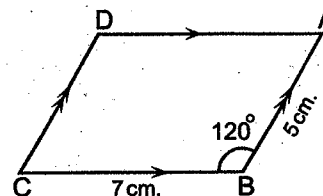
ABCD is a parallelogram in which

$AB = 5 \text{ cm.}$, $BC = 7 \text{ cm.}$,

$m(\angle ABC) = 120^\circ$

Without using geometrical instruments

Find : $m(\angle ADC)$, the length of \overline{DC} and the length of \overline{AD}

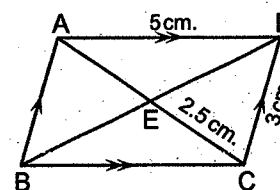


3 In the opposite figure :

ABCD is a parallelogram in which

$CD = 3 \text{ cm.}$, $EC = 2.5 \text{ cm.}$, $AD = 5 \text{ cm.}$

Find the length of each of : \overline{AB} , \overline{BC} and \overline{AC}



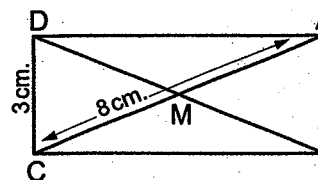
4 In the opposite figure :

ABCD is a rectangle in which $AC = 8 \text{ cm.}$

and $CD = 3 \text{ cm.}$

Find : (1) Length of \overline{BD}

(2) The perimeter of $\triangle ABM$



5 [a] In the opposite figure :

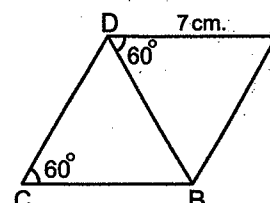
ABCD is a parallelogram in which $m(\angle C) = 60^\circ$

, $m(\angle ADB) = 60^\circ$ and $AD = 7 \text{ cm.}$

Find : (1) $m(\angle A)$ and $m(\angle ABD)$

(2) The type of the triangle ABD according to its sides

(3) The perimeter of the shape ABCD



[b] In the opposite figure :

ABCD is a parallelogram in which

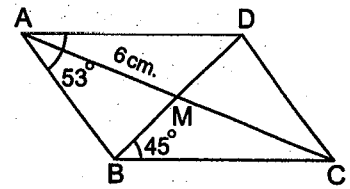
$m(\angle BAD) = 53^\circ$, $m(\angle DBC) = 45^\circ$, $AM = 6$ cm.

Calculate without using measuring tools each of :

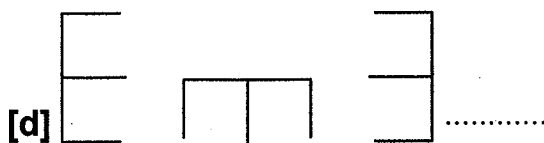
(1) $m(\angle ABD)$

(2) $m(\angle ADC)$

(3) AC




1 Draw the next shape in each pattern in each of the following :







2 Choose the correct answer between brackets :

[a] The two diagonals are perpendicular and equal in length in

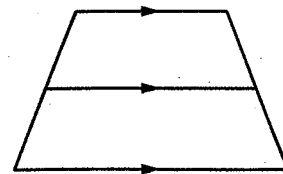
(rectangle **or** square **or** parallelogram **or** rhombus)

[b]  (in the same pattern)

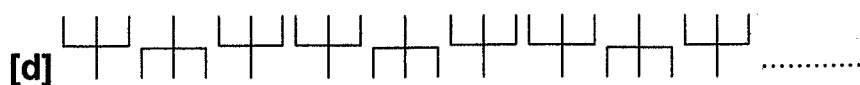
( **or**  **or**  **or** )

[c] In the opposite figure :





The number of trapezoids is



(1 **or** 2 **or** 3 **or** 5)



(The description of the pattern is repetition of)

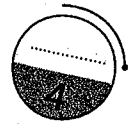
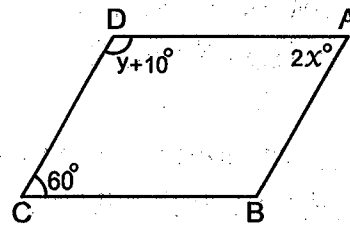
( **or**  **or**  **or** )

[e] If one angle in a parallelogram is right , then it is called

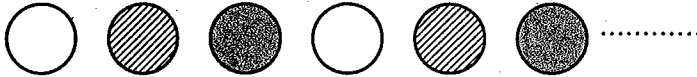
(trapezium **or** square **or** rectangle **or** rhombus)

3 [a] In the opposite figure :

ABCD is a parallelogram , then
find the value of each of x and y



[b] Discover the following pattern
, then write its description :



(The description of the pattern is repetition of)

4 In the opposite figure :

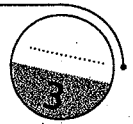
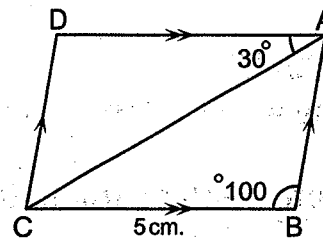
ABCD is a parallelogram in which
 $m(\angle B) = 100^\circ$, $m(\angle CAD) = 30^\circ$
and $BC = 5$ cm.

Find :

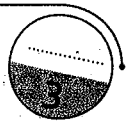
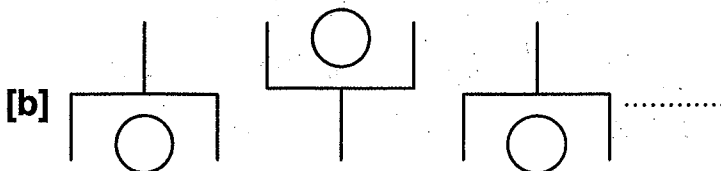
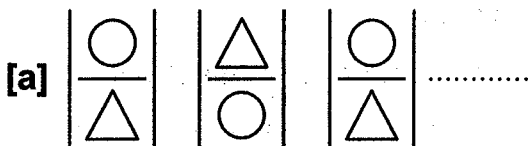
[a] $m(\angle D)$

[b] $m(\angle ACD)$

[c] The length of \overline{AD}



5 Complete in the same pattern :



- 1** Find the volume of each of the following figures considering the unit of volume is cm^3 :

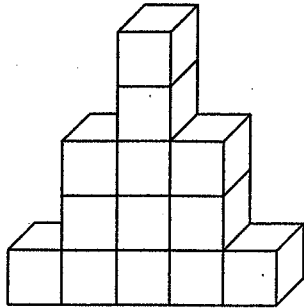


Fig. (1)

The volume = cm^3

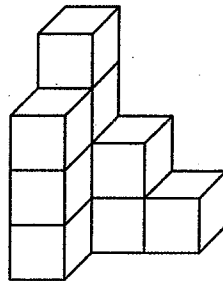


Fig. (2)

The volume = cm^3

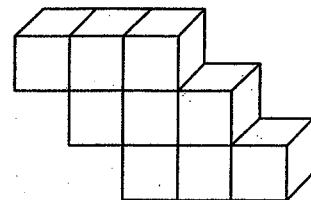


Fig. (3)

The volume = cm^3

- 2** Complete each of the following :

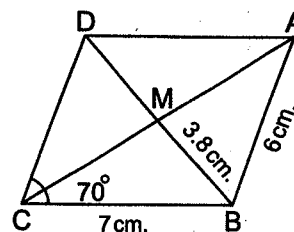
- [a] In the cuboid , each two opposite faces are and
[b] In the cube , there are edges and vertices.
[c] $17 \text{ m}^3 = \dots\dots\dots \text{dm}^3$
[d] If the dimensions of a cuboid are equal in length , then it is called
[e] The cubic centimetre is

- 3** Choose the correct answer between brackets :

- [a] In the parallelogram , the sum of measures of any two consecutive angles =° (90 or 180 or 100 or 80)
[b] Each of cube and cuboid has faces. (8 or 12 or 6 or 4)
[c] $3\,250 \text{ mm}^3 = \dots\dots\dots \text{cm}^3$ (3.25 or 32.5 or 0.325 or 325)
[d] $7 \text{ dm}^3 = \dots\dots\dots \text{cm}^3$ (0.007 or 7 000 or 700 or 70)
[e] In the cube , all the edges are
(different in length or equal in length or parallel or intersecting)

- 4** In the opposite figure :

ABCD is a parallelogram in which $AB = 6 \text{ cm}$,
 $BC = 7 \text{ cm}$, $BM = 3.8 \text{ cm}$, $m(\angle C) = 70^\circ$
Without using geometrical instruments , find :
 $m(\angle ADC)$, the perimeter of $\triangle BCD$



5 [a] Arrange each of the following ascendingly :

5 m^3 , $500\,000 \text{ cm}^3$ and 50 dm^3

[b] In the opposite figure :

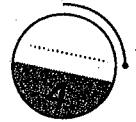
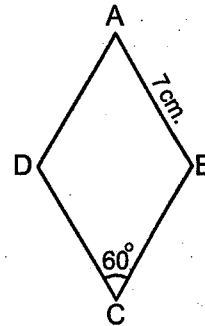
ABCD is a rhombus in which $m(\angle BCD) = 60^\circ$,

$AB = 7 \text{ cm}$.

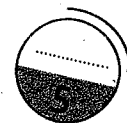
Find :

(1) The perimeter of the figure ABCD

(2) $m(\angle ABC)$



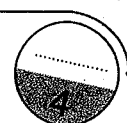
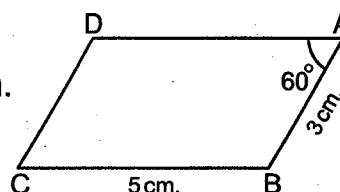
1 Complete each of the following :



- [a] The volume of the cuboid = \times height
- [b] The volume of the cuboid whose dimensions are 5 cm. , 6 cm. and 8 cm. is cm^3
- [c] The volume of a cuboid with base area 88 cm^2 and height 45 cm. is
- [d] The base area of the cuboid = $\frac{\text{.....}}{\text{.....}}$
- [e] The four angles are right in each of and

2 [a] In the opposite figure :

ABCD is a parallelogram which has $AB = 3 \text{ cm}$.
 , $BC = 5 \text{ cm}$. and $m(\angle BAD) = 60^\circ$

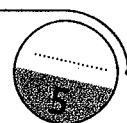


(1) Find : $m(\angle ABC)$

(2) Calculate the perimeter of the parallelogram ABCD

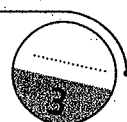
- [b] A cuboid-shaped box of dimensions 12 cm. , 6 cm. and 18 cm. was filled with pieces of sweets , each piece in the shape of a cuboid of dimensions 2 cm. , 1 cm. and 3 cm.
Find the number of the pieces that filled the box.

3 Choose the correct answer between brackets :

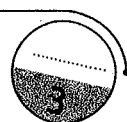


- [a] $6\,500 \text{ dm}^3 = \text{.....} \text{ m}^3$ (6.5 or 65 or 650 or 6 500 000)
- [b] If the volume of a cuboid is $1\,800 \text{ cm}^3$ and its base dimensions are 30 cm. and 10 cm. , then its height = cm.
(9 or 6 or 12 or 15)
- [c] The number of faces of the cuboid is
(4 or 6 or 12 or 8)
- [d] If a cuboid of volume 72 cm^3 , its height is 6 cm. and its length is 4 cm. , then its width = cm. (12 or 9 or 6 or 3)
- [e] Cubic decimetre is a unit for measuring
(length or volume or weight or area)

- 4 The sum of dimensions of a cuboid is 240 cm. and the ratio among them is 2 : 3 : 5 Find its volume.



- 5 $3\,600 \text{ cm}^3$ of water was poured in a cuboid-shaped vessel with a square base of side length 20 cm. Find the height of water in the vessel.



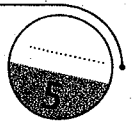
1 Complete :

- [a] The volume of the cube = \times \times
- [b] A cube of edge length 6 cm. , its volume = cm^3
- [c] The area of one face of a cube is 9 cm^2 , then its volume = cm^3
- [d] If the sum of the lengths of the edges of a cube is 60 cm. , then its volume =
- [e] If the perimeter of one face of a cube is 8 cm. , then the volume of this cube =



2 Choose the correct answer between brackets :

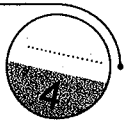
- [a] $10 \text{ dm}^3 = \dots \text{ cm}^3$ (10 or 100 or 1 000 or 10 000)
- [b] The volume of a cuboid is 120 cm^3 , if its base area is 24 cm^2 , then its height = cm. (5 or 6 or 10 or 12)
- [c] The number of vertices of a cube is (8 or 12 or 6 or 4)
- [d] The parallelogram in which two adjacent sides are equal in length is called
(a square or a rectangle or a trapezium or a rhombus)
- [e] A cuboid with a square base of side length 7 cm. and height 10 cm. , then its volume is
(49 cm^3 or 70 cm^2 or 70 cm^3 or 490 cm^3)



3 [a] Which is greater ? The volume of a cube of edge length 5 cm. or the volume of a cuboid of dimensions 6 cm. , 5 cm. and 4 cm.

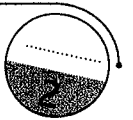
- [b] A metal cuboid with dimensions 56 cm. , 21 cm. and 7 cm. was melted and converted into small cubes with edge length 14 cm. for each.

Calculate the number of these cubes.



4 The inner dimensions of a cuboid-shaped box are 54 cm. , 60 cm. and 30 cm. , it is needed to put inside it cube-shaped packets of biscuits whose edge length is 6 cm.

Find the number of packets of biscuits which fill the box.

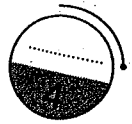
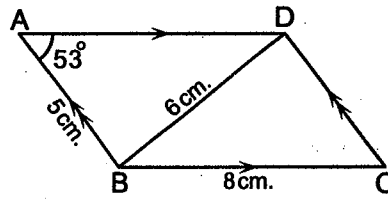


5 In the opposite figure :

ABCD is a parallelogram in which
 $m(\angle BAD) = 53^\circ$, $AB = 5$ cm.
, $BC = 8$ cm. and $BD = 6$ cm.

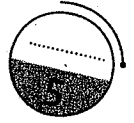
Find :

- (1) $m(\angle BCD)$
- (2) The perimeter of $\triangle DBC$



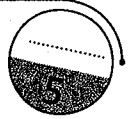
1 Complete :

- [a] The litre is a unit for measuring [b] $4\frac{2}{5}$ litres = cm^3
 [c] 3 litres = dm^3 [d] 0.45 m^3 = litres
 [e] 680 litres = m^3

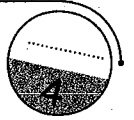


2 Choose the correct answer between brackets :

- [a] The inner dimensions of a cuboid container is 20 cm. , 20 cm. and 30 cm. , its capacity = litres.
 (0.12 or 1.2 or 12 or 120)
 [b] $\frac{3}{4}$ litre = mL. (0.75 or 7.5 or 750 or 75)
 [c] Decimetre is a unit for measuring
 (capacity or volume or length or weight)
 [d] 38 millilitres = cm^3 (38 000 or 3 800 or 380 or 38)
 [e] The two diagonals are perpendicular in
 (rectangle or rhombus or parallelogram or trapezium)



- [3] [a] A tin in the shape of a cuboid of internal dimensions are 30 cm. , 25 cm. and 40 cm. is filled with oil. Find the price of the oil if the price of one litre is L.E. 3.5

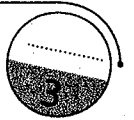


- [b] A cube-shaped tin of inner edge length 40 cm. is full of oil. It is needed to put the oil in a number of bottles each of capacity half a litre. How many bottles are needed ?

- [4] [a] The capacity of a bottle is $\frac{3}{4}$ litres , is filled with alkohol.

It is wanted to put this amount in small bottles which the capacity of each is 25 cm^3 . Find the number of small bottles.

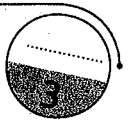
- [b] 3.6 litres of water are poured in a cuboid-shaped vessel with a square-base of side length 20 cm. Find the height of water in the vessel.



- [5] [a] A building worker used 1 500 bricks to build a wall.

Calculate the volume of the wall in m^3 if the brick is in the shape of a cuboid of dimensions 0.25 m. , 0.12 m. and 0.06 m.

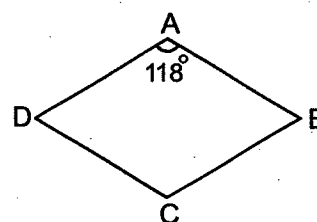
- [b] Find the volume of cube whose edge length is equal to the side length of an equilateral triangle of perimeter 18 cm.



1 Complete each of the following :

- [a] The data that describe the conditions of individuals using words is called
- [b] The data that consists of numbers to represent a certain phenomenon is called
- [c] If the dimensions of a cuboid are equal , then it is called a
- [d] In the opposite figure :

ABCD is a rhombus in which $m(\angle A) = 118^\circ$
 , then $m(\angle B) = \dots\dots\dots^\circ$



- [e] The birth date is data.

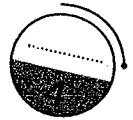
2 Choose the correct answer between brackets :

- [a] The following data are descriptive except
(the favorite colour **or** birth place **or** age **or** blood species)
- [b] The following data are quantitative except
(length **or** weight **or** age **or** blood species)
- [c] If the edge length of a cube = 4 cm. , then its volume = cm^3
(6 **or** 8 **or** 24 **or** 64)
- [d] The volume of the cuboid is 36 cm^3 , with its base is square shaped of side length 3 cm. , then its height = cm.
(108 **or** 12 **or** 9 **or** 4)
- [e] 850 millilitres = litres.
(0.85 **or** 85 **or** 0.085 **or** 850 000)

- 3 Read the written data on the opposite bottle ,
then classify them into descriptive data
and quantitative data.




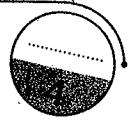
- 4 The base of a cuboid is a rectangle whose perimeter = 80 cm. and the ratio between its length to its width = 5 : 3 , calculate its volume if its height is 7 cm.



- 5 [a] The opposite card is a membership card of a library , answer :

- (1) What are the quantitative data ?
(2) What are the descriptive data ?

Egyptian Library	
Name :	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Personal photo </div> <div style="text-align: center;"> Library stamp  </div>
Age :	
Job :	
Membership No. :	



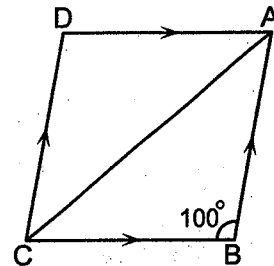
- [b] In the opposite figure :

ABCD is a parallelogram in which

$$m(\angle BAC) = m(\angle DAC), m(\angle B) = 100^\circ$$

Find :

- (1) $m(\angle D)$
(2) $m(\angle BAC)$



- 1 Bassem wants to know the favourite sport for the students in his classroom.

The number of students is 36 students.

He asked everyone , the answers were :

(Volleyball - football - football - swimming - tennis - football - walking - swimming - volleyball - walking - football - tennis - football - football - gymnastics - walking - tennis - tennis - swimming - football - swimming - walking - football - walking - tennis - basketball - swimming - swimming - football - basketball - football - walking - swimming - football - football - swimming)

[a] Form a frequency table for this data.

[b] What is the number of students who prefer tennis ?

- 2 The following table shows the produced amount of vegetables in tons by a farm in a year :

Vegetable	Tomato	Eggplant	Green beans	Potato	Cucumber	Total
No. of tons	20	14	5	25	16	80

[a] Which is the vegetable that has the greatest number of produced tons ? and what is the order of it among the produced vegetables if you arrange them according to the produced amount of each kind ascendingly ?

[b] How many tons of tomato are produced ? And what is the percentage of it ?

- 3 [a] In the opposite figure :

XYZL is a parallelogram in which

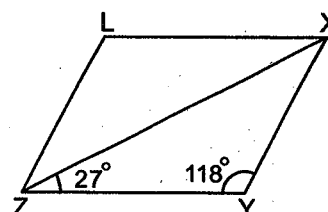
$m(\angle Y) = 118^\circ$, $m(\angle XZY) = 27^\circ$, find :

(1) $m(\angle YXZ)$

(2) $m(\angle LZX)$

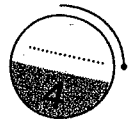
(3) $m(\angle LXZ)$

(4) $m(\angle L)$



[b] A metallic cube is of edge length 30 cm. , it is melted to be used in manufacture and it is converted into cuboid in which the dimensions of the base are 40 cm. and 25 cm. Calculate its height.

4 Here are the evaluations of 20 students in mathematics :



good	pass	pass	good	weak
excellent	very good	pass	very weak	very good
good	weak	good	pass	pass
good	pass	weak	good	pass

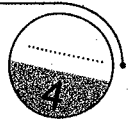
[a] Form a frequency table of this data.

[b] What is the most common evaluation among the students ?

[c] What is the least common evaluation among the students ?

5 **[a]** If the capacity of a tank in the shape of cuboid is 24 000 litres.

Find the area of the base if the height is 3 metres.



[b] Which is greater in volume ?

A cube of edge length 9 cm. or a cuboid with dimensions 8 cm. , 9 cm. and 10 cm.

1 Complete each of the following :

- [a] The difference between the greatest value and the smallest value in a set of individuals is called
- [b] If the marks of 4 pupils in a test are 26 , 30 , 13 and 29 , then the range of these marks =
- [c] If the values of a frequency distribution lie between 10 and 60 , then the range of this distribution =
- [d] If one of the angles of a parallelogram is right , then it will be called
- [e] A cuboid with a square base of side length 4 cm. and height 5 cm. , then its volume = cm^3

2 The following data shows the number of holidays that 40 workers of a factory have got during a year :

12	27	14	25	13	22	14	26	11	15
30	21	15	22	23	28	16	21	30	25
27	16	22	20	26	30	21	15	16	23
15	30	28	21	24	15	27	30	21	28

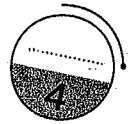
Form a frequency table by using the sets 11 – , 16 – , 21 – , ... , the length of each is 5 days , then find the number of workers who have got 21 days or more in the year.

3 The following table gives the frequency distribution of the daily wages in L.E. for 50 workers :

Set of wages	10 –	12 –	14 –	16 –	18 –	20 –	22 –
No. of workers	6	7	12	10	9	4	2

- [a] Find the number of workers whose wages are less than L.E. 16
- [b] What is the percentage of workers whose wages are L.E. 20 or more ?

- 4** The following table gives the frequency distribution of the marks of 40 pupils in mathematical examination :

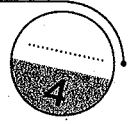


Sets	10 –	20 –	..... –	40 –	50 –	Total
Frequency	4	8	12	10	.....	40

[a] Complete the table.

[b] Find the number of pupils whose marks are less than 40 and its percentage.

- 5** [a] A cubic glass vessel , its inner edge length is 20 cm. This vessel contains an amount of water. If we throw a metallic piece in it then the water level raised 3 cm. because of that.



Find the volume of the metallic piece.

[b] A cube-shaped vessel , its internal edge length is 20 cm. It is filled with cooking oil :

(1) Calculate the capacity of the vessel.

(2) If the price of one litre of cooking oil is 14 pounds , calculate the price of all the cooking oil.

- 1 The following table gives the frequency distribution of the ages of 40 students in a school :

The age	6 –	8 –	10 –	12 –	14 –	Total
Number of students	8	9	6	12	5	40

Draw the frequency curve for this distribution.

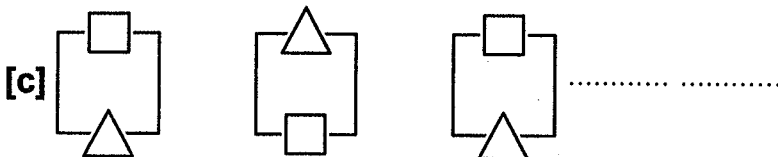
- 2 The following table shows the marks of 100 pupils in maths :

Marks	20 –	30 –	40 –	50 –	Total
Number of pupils	15	30	40	15	100

- [a] What is the number of the pupils who got less than 40 marks ?
[b] Draw the frequency curve for this distribution.

- 3 Complete each of the following :

- [a] A parallelogram is a rhombus when its two diagonals are
[b] 0.3 litre = millilitres.



- [d] If the range of frequency distribution is 23 and the lowest value is 35 , then the highest value is
[e] The centre of the set which its lower limit = 4 and its upper limit = 10 is

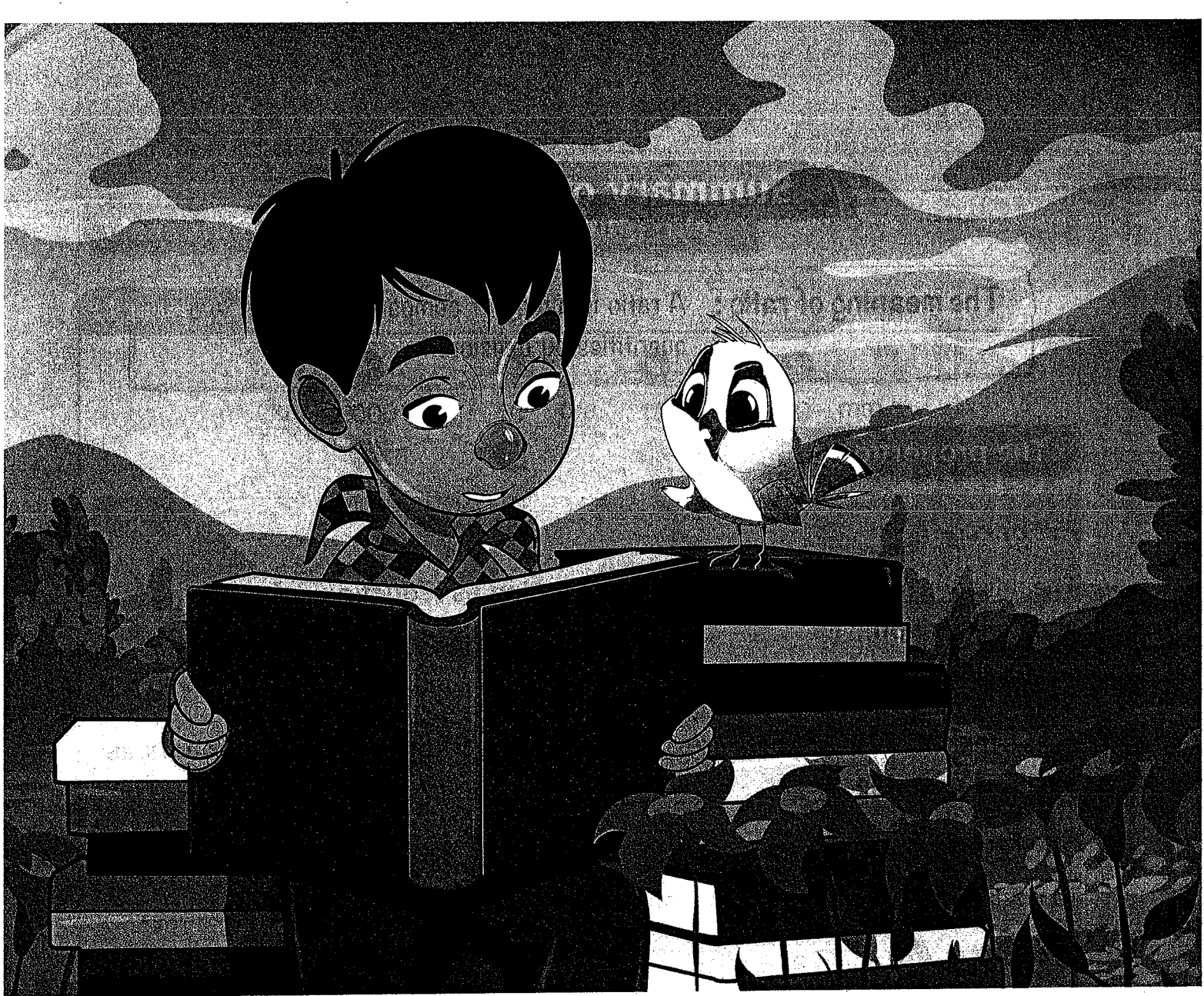
- 4 [a] The sum of areas of all faces of a cube is 54 cm^2 . Calculate its volume.

- [b] 72 litres of molasses are needed to be put in tins of the same kind , each has a rectangular-shaped base with dimensions 18 cm. and 10 cm. , and height 16 cm. How many tins are needed ?

- 5 The following table shows the ages of visitors to an exhibition within an hour of the day :

Visitor's age	10 –	20 –	30 –	40 –	50 –	Total
Number of visitors	6	9	12	10	8	45

- (1) What is the number of visitors whose ages are less than 40 years ?
(2) Draw the frequency curve for this distribution.



SUMMARY OF THE FIRST TERM

Summary of Unit One

The meaning of ratio : A ratio is a way of comparing between two quantities by division.

The properties of ratio

Property ①

The ratio has the same properties of the fraction as **reduction** , **simplifying** and **comparison**.

Property ②

In its simplest form , the two terms of the ratio should be two **whole numbers as small as possible**.

Property ③

To compare two quantities using ratio , they must have the same unit.

Property ④

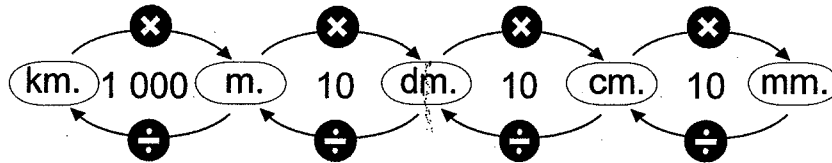
The ratio between two quantities has no units.

Remarks

- ① In an equilateral triangle, the ratio of the side length to the perimeter is $1 : 3$
- ② In a square, the ratio of the side length to the perimeter is $1 : 4$
- ③ In a rhombus, the ratio of the side length to the perimeter is $1 : 4$
- ④ In a square, the ratio of any side length to another side length is $1 : 1$
- ⑤ In a rhombus, the ratio of any side length to another side length is $1 : 1$
- ⑥ In a circle, the ratio of the diameter length to the circumference is $2r : 2\pi r$ (which equals $1 : \pi$)
- ⑦ In a circle, the ratio of the radius length to the circumference is $r : 2\pi r$ (which equals $1 : 2\pi$)

Measuring units and their converting rules

The length units

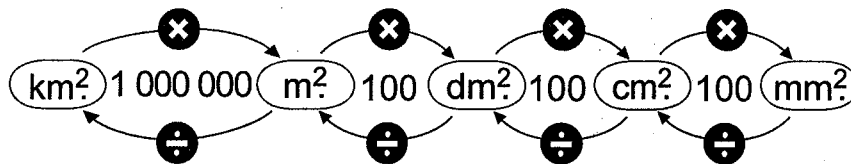


For example :

$$\bullet 5 \text{ km.} = 5 \times 1\,000 = 5\,000 \text{ m.}$$

$$\bullet 6\,000 \text{ cm.} = 6\,000 \div 100 = 60 \text{ m.}$$

The area units

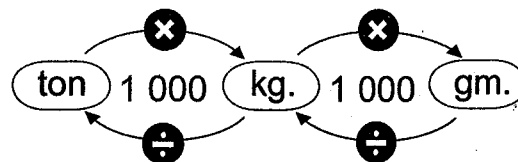


For example :

$$\bullet 3 \text{ km}^2 = 3 \times 1\,000\,000 = 3\,000\,000 \text{ m}^2$$

$$\bullet 1\,000 \text{ cm}^2 = 1\,000 \div 100 = 10 \text{ dm}^2$$

The weight units

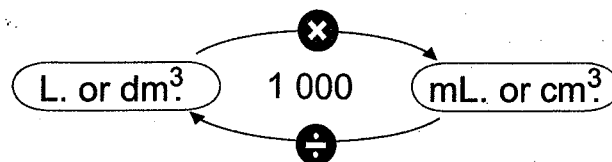


For example :

$$\bullet 6 \text{ kg.} = 6 \times 1\,000 = 6\,000 \text{ gm.}$$

$$\bullet 20\,000 \text{ kg.} = 20\,000 \div 1\,000 = 20 \text{ tons.}$$

The capacity units

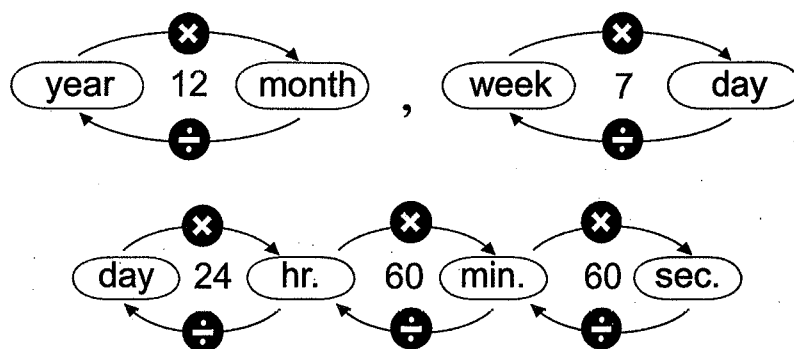


For example :

$$\bullet 5 \text{ L.} = 5 \times 1\,000 = 5\,000 \text{ cm}^3$$

$$\bullet 7\,000 \text{ cm}^3 = 7\,000 \div 1\,000 = 7 \text{ L.}$$

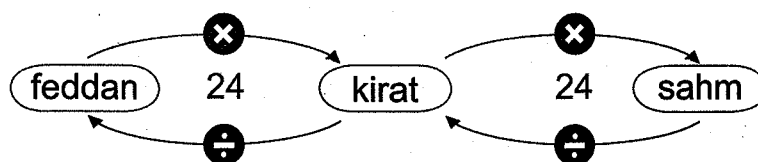
The time units



For example :

- 5 hr. = $5 \times 60 = 300$ min.
- 49 days = $49 \div 7 = 7$ weeks

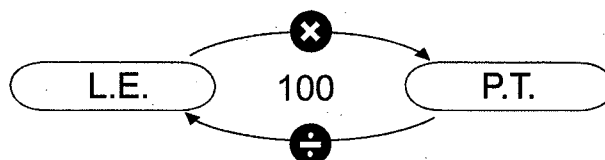
Units of cultivated lands



For example :

- 2 feddans = $2 \times 24 \times 24 = 1152$ sahrs
- 120 kirats = $120 \div 24 = 5$ feddans

The money units



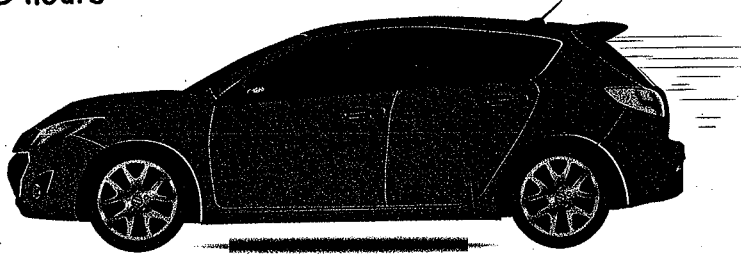
For example :

- L.E. 50 = $50 \times 100 =$ P.T. 5 000
- P.T. 1 000 = $1\,000 \div 100 =$ L.E. 10

A rate is a ratio of two quantities with different measurement units.

For example : If a car travels 300 km. in 5 hours, the rate is

$$\frac{300 \text{ km.}}{5 \text{ hours}} \text{ (km. and hour are different measurement units).}$$



- The rate per 1 hour is $\frac{300 \text{ km.}}{5 \text{ hours}} = \frac{60 \text{ km.}}{1 \text{ hour}} = 60 \text{ km./hr.}$

Summary of Unit Two

Proportion is an equality of two or more ratios.

The properties of proportion

Property 1

If we multiply (or divide) each of the two terms of a ratio by the same non-zero number, then the resultant ratio is equal to the first ratio and they together form a proportion.

Property 2

The product of extremes = the product of means

$$\text{Drawing scale} = \frac{\text{Length in drawing}}{\text{Length in reality}}$$

Notice that :

Both lengths should have the same units.

Remarks

If the drawing scale is

Less than 1 (< 1)

then it refers to minimization (reduction)
(length in drawing $<$ length in reality)

Greater than 1 (> 1)

then it refers to enlargement (magnification)
(length in drawing $>$ length in reality)

Proportional division is to divide anything (money, land, weights,) according to a given ratio.

- A **percentage** is a ratio its second term is 100
- A **percentage** means "per hundred" or "hundredths".

Profit = selling price (S.P.) – cost price (C.P.)

The percentage of profit = $\frac{\text{Profit}}{\text{C.P.}} \times 100 \%$

Loss = cost price (C.P.) – selling price (S.P.)

The percentage of loss = $\frac{\text{Loss}}{\text{C.P.}} \times 100 \%$

Notice that :

The cost price = buying price + expenditures (where expenditures may be maintenance , transportation , insurance , rentals , ... etc.)

Remarks

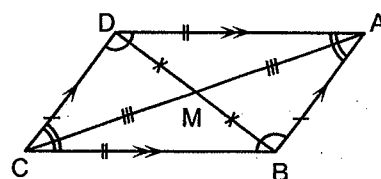
- ① When we say that the **profit** is 20 % , we mean that :
If the **cost price** (C.P.) = L.E. 100 , then the **profit** = L.E. 20 and the **selling price** (S.P.) = L.E. 120
- ② When we say that the **loss** is 15 % , we mean that :
If the **cost price** (C.P.) = L.E. 100 , then the **loss** = L.E. 15 and the **selling price** (S.P.) = L.E. 85
- ③ When we say that the **interest** is 8 % , we mean that :
If we **deposit** L.E. 100 in a bank , then the **interest** = L.E. 8 and the **amount of this money after one year** = L.E. 108
- ④ When we say that the **discount** is 25 % , we mean that :
If the **price before the discount** (The marked price) is L.E. 100 , then the **discount** = L.E. 25 and the **price after the discount** (The discount price) is L.E. 75

Summary of Unit Three

- The parallelogram : is a quadrilateral in which each two opposite sides are parallel.
- The rectangle : is a parallelogram with a right angle.
- The rhombus : is a parallelogram in which two adjacent sides are equal in length.
- The square : is a parallelogram with a right angle and two adjacent sides are equal in length.

Properties of the parallelogram

- 1 Each two opposite sides are equal in length.
- 2 Each two opposite angles are equal in measure.
- 3 The sum of measures of each two consecutive angles is 180°
- 4 The two diagonals bisect each other.



A parallelogram is

a rectangle

If :

- One of its angles is right.

or

- Its two diagonals are equal in length.

a rhombus

If :

- Two adjacent sides are equal in length.

or

- Its two diagonals are perpendicular.

a square

If :

- One of its angles is right and two adjacent sides are equal in length.

or

- One of its angles is right and its diagonals are perpendicular.

or

- The two diagonals are equal in length and perpendicular.

or

- Two adjacent sides are equal in length and its diagonals are equal in length.

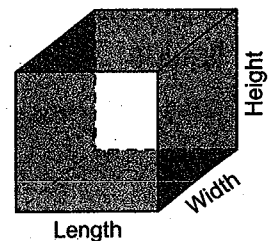
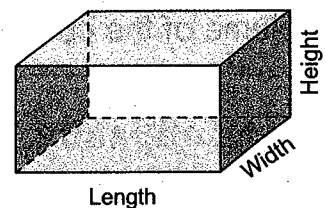
A pattern : is a sequence of symbols or figures arranged according to a certain system or rule.

Pattern unit : In visual patterns , usually you can find a unit which is repeated several times.

Solids

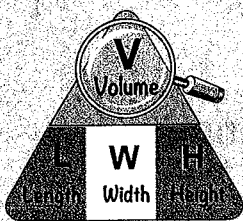
Any object that occupies a room in the space is called a solid.

- **The cuboid** has 12 edges , 8 vertices , 6 faces. and 3 dimensions : **length , width and height.**
- **The cube** has 12 edges , 8 vertices , 6 faces all these faces are congruent squares and 3 equal dimensions.

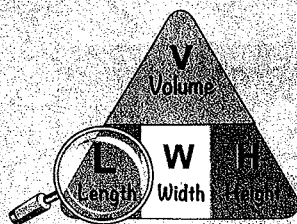


The number of **units** which a solid consists of is called the volume of the solid.

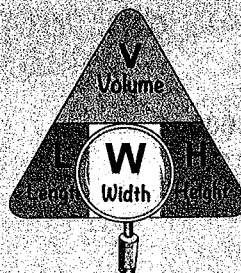
Volume of the cuboid



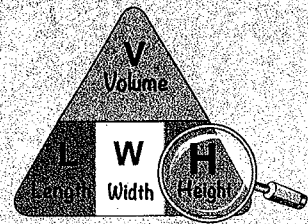
$$V = L \times W \times H$$



$$L = \frac{V}{W \times H}$$

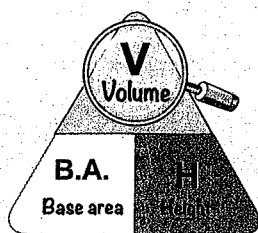


$$W = \frac{V}{L \times H}$$

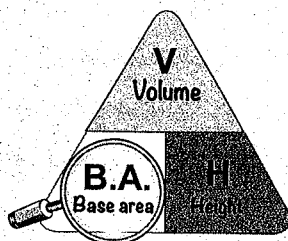


$$H = \frac{V}{L \times W}$$

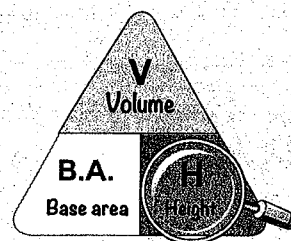
Summary



$$V = B.A. \times H$$



$$B.A. = \frac{V}{H}$$



$$H = \frac{V}{B.A.}$$

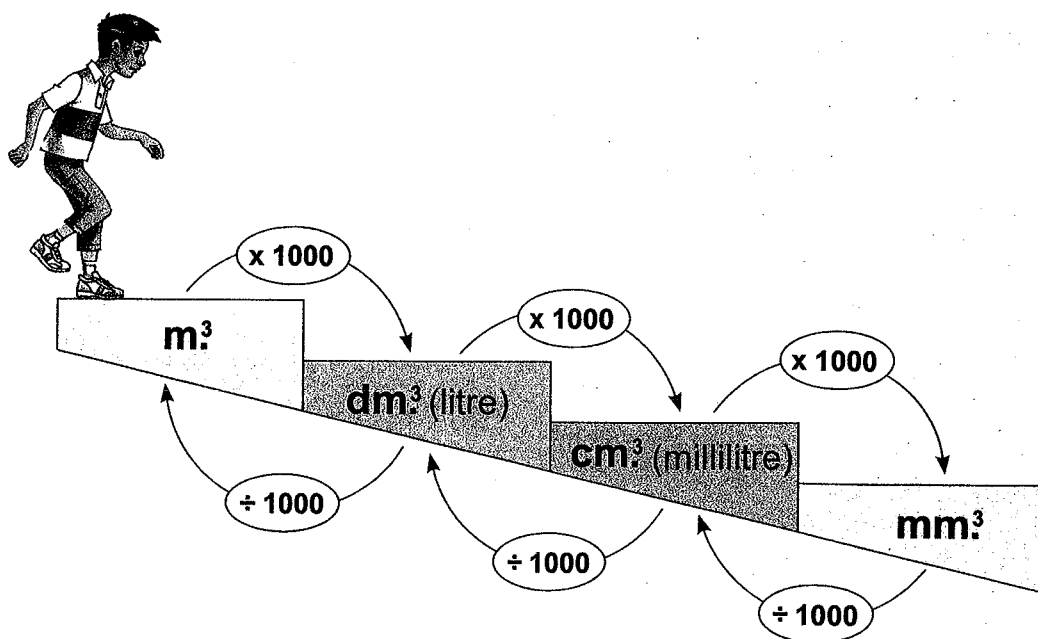
Volume of the cube

Volume of the cube = edge length \times itself \times itself

The capacity : It is the volume of the inner space of a hollow solid.

The litre (L.) and millilitre (mL.) are two units for measuring capacity or the volume of liquids.

The relation between the units of volume



Summary of Unit Four

Kinds of statistical data

1 Descriptive data :

These are data written in the form of **discription of the case** of the persons in the society as : name , qualification , gender , marital status , ...

2 Quantitative data :

These are data written in the form of **numbers** to express a certain phenomenon as : age , weight , height , ...

Remarks

① The difference between the maximum and the minimum value of the given data is called **the range of this data**.

② The difference between the upper limit and the lower limit of the set is called **the length of this set**.

③ To find the number of sets, we find the quotient of $\frac{\text{the range}}{\text{the length of the set}}$

If the quotient is a mixed number, we take the next whole number.

④ Centre of the set = $\frac{\text{lower limit} + \text{upper limit}}{2}$

Representing the statistic data by the frequency curve

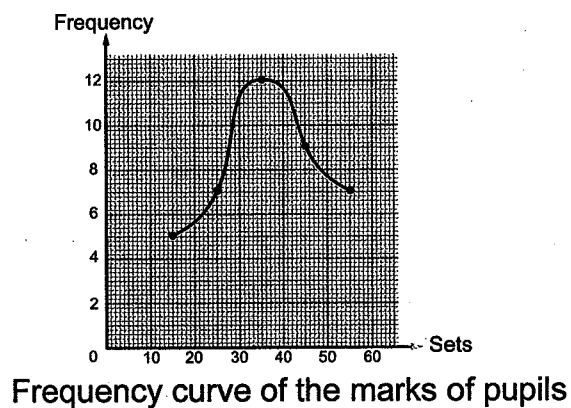
For Example

The following table shows the frequency distribution of marks of 40 pupils in the mathematics exam :

Sets	10 –	20 –	30 –	40 –	50 –	Total
Frequency	5	7	12	9	7	40

Represent these data by the frequency curve.

Solution





FINAL EXAMINATIONS

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(2 models + model for the special needs students)

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Model Examinations of the School Book

Model

1

Answer the following questions :

1 Complete each of the following :

(1) $1.5 \text{ litre} + 0.5 \text{ dm}^3 + 500 \text{ cm}^3 = \dots\dots\dots$ litres.

(2) The volume of a cuboid is 64 cm^3 and the area of its base is 16 cm^2 , then its height = $\dots\dots\dots$ cm.

(3) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = $\dots\dots\dots$: $\dots\dots\dots$

(4) The area of the triangle = $\frac{1}{2} \times \dots\dots\dots \times \dots\dots\dots$

(5) If $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C = \dots\dots\dots$

(6) The opposite table shows the marks of 40 students in one test , then the number of students who got less than 30 marks = $\dots\dots\dots$

Marks	10 –	20 –	30 – 40
Number of students	10	13	17

2 Choose the correct answer :

(1) The range of the set of values : 7 , 3 , 6 , 9 and 5 is $\dots\dots\dots$

(2 or 4 or 6 or 12)

(2) $\frac{3}{4} = \dots\dots\dots$ (in decimal form)

(0.2 or 0.5 or 0.25 or 0.75)

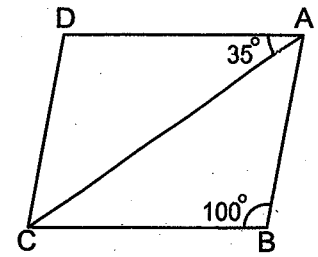
(3) An agricultural tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is $\dots\dots\dots$ hours.

(4 or 6 or 7 or 8)

(4) In the opposite figure :

ABCD is a parallelogram. , then

$m(\angle ACD) = \dots\dots\dots$



(35° or 45° or 100° or 180°)

(5) If $\frac{2}{5} = \frac{x}{15}$, then $x = \dots\dots\dots$

(2 or 5 or 6 or 15)

(6) The following data are descriptive data except

(favorite colour. or age. or birth place. or blood species.)

3 [a] A container has 12 litres of oil , it is wanted to put them in smaller bottles the capacity of each of them is 400 cm^3 Calculate the number of bottles which are needed.

[b] If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.

4 [a] The ratio among the measures of the angles of a triangle is 2 : 3 : 4 Find the measure of each angle in this triangle.

[b] A metallic cube of edge length 12 cm. It needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

5 [a] Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 , at the end of the year , the net profit was L.E. 3 900 Calculate the share of each of them from the profit.

[b] The following table shows the marks of 100 students in one month in math test :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.

Model 2

Answer the following questions :

1 Choose the correct answer :

- (1) If one angle of a parallelogram is right , then it is called a
(rectangle. **or** square. **or** rhombus. **or** cube.)
- (2) $\frac{24}{5} = \dots\dots\dots$ ($4\frac{1}{5}$ **or** $3\frac{2}{5}$ **or** $4\frac{4}{5}$ **or** $2\frac{4}{5}$)
- (3) If the marks of 6 students in one exam are 29 , 33 , 57 , 40 , 36 and 49 , then
the range of these marks = (32 **or** 33 **or** 28 **or** 86)
- (4) If $\frac{4}{6} = \frac{12}{x}$, then $x + 2 = \dots\dots\dots$ (16 **or** 18 **or** 20 **or** 22)
- (5) $1\frac{3}{4} = \dots\dots\dots\%$ (25 **or** 50 **or** 75 **or** 175)
- (6) $\frac{513}{614} \dots\dots\dots \frac{432}{145}$ (**>** **or** **<** **or** **=** **or** **≥**)

2 Complete the following statements :

- (1) The data : the age , the tall , the weight and favorite food are quantitative data except
- (2) A wooden box in the form of a cube , its external volume is $1\,000\text{ cm}^3$ and its capacity is 729 cm^3 , then the volume of wood of the box
= cm^3
- (3) The following table shows the marks of 50 students in one month in math :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	5	15	20	10	50

then the number of students whose marks are less than 40
is students.

- (4) If the height of the fence of the villa in the design is 5 cm. and its real height is 6 metres , then the drawing scale is :

(5) $\frac{3}{4} + 5\frac{1}{2} = 7 - \dots\dots\dots$

(6) A car consumes 20 litres of petrol to cover a distance 250 km.
 , then the rate of consumption of the car =

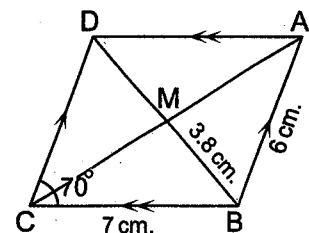
3 [a] Three persons started in business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year , the profit was 5 520 pounds.
 Calculate the share of each of them.

[b] 10 litres of water were poured in a vessel in the shape of a cuboid , its base is a square of side length 25 cm. Find the height of the water in the vessel.

4 [a] In one of our schools , there are 360 students , if the ratio between the number of boys and the number of girls is 1 : 2
 Find each of the number of boys and girls.

[b] In the opposite figure :

ABCD is a parallelogram in which AB = 6 cm.
 , BC = 7 cm. , BM = 3.8 cm. , $m(\angle C) = 70^\circ$
 Without using geometrical instruments.



Find : $m(\angle ADC)$, the perimeter of $\triangle BCD$

5 [a] Heba bought a mobile phone for 660 pounds with a discount 15 %
 Calculate the price of the mobile phone before the discount.

[b] The following table shows the number of hours which are spent by 40 pupils to study their lesson daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	3	8	12	11	40

Represent these data by the frequency curve.

Model for the special needs students

Answer the following questions :

1 Complete the following statements :

(1) 5 000 grams : 8 kilograms = : (in the simplest form)

(2) $\frac{3}{10} = \dots\dots\dots \%$

(3) The volume of a cuboid = the area of base \times

(4) 3 litres = cm^3

2 Choose the correct answer :

(1) The range of the values 50 , 25 , 35 and 20 is

(10 or 20 or 30)

(2) If $\frac{2}{3} = \frac{10}{x}$, then $x = \dots\dots\dots$

(6 or 15 or 20)

(3) The diagonals are perpendicular in

(rectangle or square or parallelogram)

(4) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is

(1 : 10 or 1 : 1 000 or 1 : 100)

3 Choose from column (A) to the suitable one from column (B) :

A
(1) The cube has edges.
(2) If the drawing scale < 1 , this expresses
(3) The ratio between the side length of the square and its perimeter =
(4) All of angles of the rectangle are equal in measure and the measure of any of them =

B
minimization
12
90°
1 : 4

4 Put true (✓) or false (X) :

- (1) The numbers 1 , 2 , 6 and 12 are proportional. ()
- (2) If the percentage of boys is 35 % from the total of the number of pupils in a class , then the percentage of girls is 20 % ()
- (3) The favorite colour is a descriptive data. ()
- (4) The volume of a cube of edge length 3 cm. = 9 cm² ()

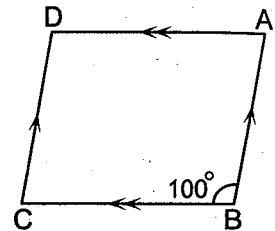
5 [a] Complete each of the following :

(1) If $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C = \dots\dots\dots : \dots\dots\dots$

(2) In the opposite figure :

ABCD is a parallelogram , then

$m(\angle D) = \dots\dots\dots^\circ$



[b] The following table shows the marks of 50 students in one month in maths :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	6	10	20	14	50

Complete :

- (1) The number of students whose marks are less than 20 = students.
- (2) The number of students whose marks are 40 or more = students.

Some School's Examinations from Different Governorats

1 Cairo Governorate

Nasr City Edu. Administration
St. George's College



Answer the following questions :

1 Choose the correct answer :

- (1) If the ratio among the measurements of the angles of the triangle is 3 : 4 : 5 , then the measure of the greatest angle =
(90° or 75° or 60° or 55°)
- (2) 16 : 48 = : (1 : 2 or 1 : 4 or 1 : 5 or 1 : 3)
- (3) 5.7 litres = cm³ (5.7 or 570 or 5 700 or 57)
- (4) 3 , 4 , x and 12 are proportional quantities , then x =
(9 or 5 or 7 or 8)
- (5) The two diagonals are equal in length and perpendicular in
(parallelogram or square or rectangle or rhombus)
- (6) $\frac{2}{5}$ = % (20 or 30 or 40 or 50)
- (7) The range of the values 7 , 3 , 6 , 9 and 1 is
(8 or 1 or 7 or 0)
- (8) $\frac{1}{2}$ kg. : 700 gm. = : (2 : 7 or 7 : 8 or 5 : 7 or 7 : 9)
- (9) If the drawing length of an object is 2 cm. and the real length is 20 m. , then the drawing scale is =
(1 : 10 or 1 : 100 or 1 : 1 000 or 1 : 10 000)
- (10) If the volume of a cube = 0.125 cm³ , then its edge length = cm.
(25 or 0.25 or 0.5 or 5)
- (11) Ahmed drinks 21 glasses of milk weekly , then he drinks glasses of milk everyday.
(3 or 9 or 6 or 12)
- (12) From the quantitative data is
(favorite colour or name or age or blood type)
- (13) The ratio between the perimeter of an equilateral triangle and its side length =
(1 : 3 or 2 : 3 or 3 : 1 or 3 : 2)
- (14) $\frac{1}{4} : \frac{1}{3}$ =
(1 : 4 or 1 : 3 or 3 : 4 or 4 : 3)

2 Complete each of the following :

- (1) If the lower limit of the set = 10 and the upper limit = 30 ,
then the centre =
- (2) If $A : B = 1 : 2$ and $B : C = 3 : 5$, then $A : C = \dots : \dots$
- (3) If the drawing length < 1 , this express
- (4) 3 weeks : 24 days = : (in the simplest form)
- (5) $1 - (37 \% + 41 \%) = \dots$
- (6) The ratio between two numbers is $7 : 12$, if their sum is 76 , then the
greater number =
- (7) A cuboid is of dimensions 8 cm. , 6 cm. and 10 cm. , then its volume is
..... cm^3
- (8) If the perimeter of one face of a cube is 24 cm. , then its volume is cm^3

3 Answer the following questions :

- (1) Khaled bought a flat for L.E. 150 000 After selling it , he found that the
percentage of his loss was 5 % Calculate the selling price of the flat.

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- (2) A cube , the perimeter of its base is 40 cm. Calculate its volume.

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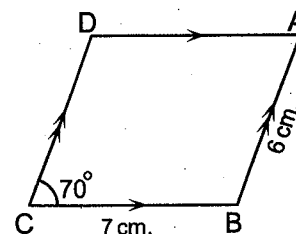
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- (3) In the opposite figure :

ABCD is a parallelogram ,
in which $m(\angle BCD) = 70^\circ$,
 $AB = 6 \text{ cm.}$ and $BC = 7 \text{ cm.}$

Find : [a] $m(\angle D)$

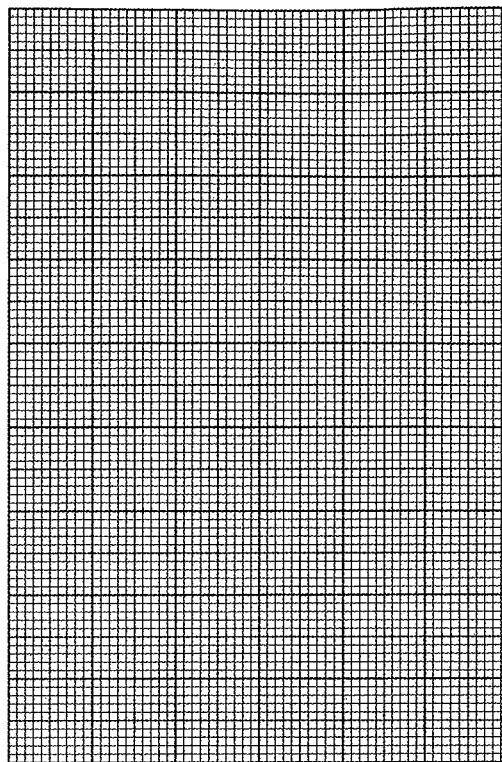
[b] The length of each of \overline{CD} and \overline{AD}



- (4) The following table shows the number of hours , which are spent by 60 pupils :

Number of hours	10 –	20 –	30 –	40 –	50 –	Total
Number of pupils	9	13	18	12	8	60

Represent this distribution by a frequency curve.



2 Cairo Governorate

Maadi Educational Zone
Victory College Maadi



Answer the following questions :

1 Choose the correct answer :

- (1) If $A : B = 2 : 3$ and $B : C = 3 : 5$, then $A : C = \dots\dots\dots$
 (3 : 2 or 5 : 2 or 4 : 5 or 2 : 5)
- (2) The following data are descriptive data except
 (favorite colour or age or name or birth place)
- (3) 8 000 gm. : 5 kg. = (4 : 5 or 5 : 8 or 2 : 3 or 8 : 5)
- (4) If one angle of a parallelogram is right , then its called
 (rectangle or rhombus or square or cube)
- (5) The cuboid has faces. (6 or 4 or 12 or 8)
- (6) $1.75 = \dots\dots\dots\%$ (75 or 0.175 or 175 or 17.5)

2 Complete :

- (1) If the drawing scale > 1 , this expresses
- (2) Mona deposit L.E. 9 000 in a bank with interest 11 % per year , the amount of sum after one year = L.E.

(3) If Hazem studies 21 hours weekly , then the rate = hours/day

(4) The ratio between two numbers =

3 Choose the correct answer :

(1) $5.6 \text{ dm}^3 = \dots\dots\dots$ litres. (5600 **or** 560 **or** 5.6 **or** 56)

(2) The ratio between the side length of an equilateral triangle and its perimeter is (1 : 3 **or** 1 : 4 **or** 1 : 1 **or** 3 : 1)

(3) The is a ratio with second term is 100
(proportion **or** percentage **or** rate **or** drawing scale)

(4) The ratio between a child's age to his father's age is 2 : 9 , if the child's age is 8 years , then his father's age is years. (63 **or** 13 **or** 36 **or** 18)

(5) If $\frac{2}{3} = \frac{12}{x}$, then $x + 2 = \dots\dots\dots$ (16 **or** 20 **or** 18 **or** 36)

(6) A primary school has 540 pupils , if the ratio between the number of boys and the number of girls is 4 : 5 , then the number of boys is
(300 **or** 240 **or** 352 **or** 675)

4 Complete each of the following :

(1) If the length of an insect in the picture is 10 cm. and its real length is 2 mm. , then the drawing scale = :

(2) In the parallelogram , the sum of the measures of any two consecutive angles is°

(3) The range of the 7 , 3 , 6 , 9 and 5 is

(4) The sum of lengths of all edges of a cube is 132 cm. , then its volume is cm^3

5 Answer the following :

(1) Three persons participated in a commerce , the first paid L.E. 1 500 , the second paid L.E. 2 000 and the third paid L.E. 2 500 , at the end of the year the loss is L.E. 1 200

Find the share of each of them from loss.

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- (2) 10 litres of water were poured in a vessel in the shape of a cuboid ,
its base is square of side length is 25 cm.
Find the height of the water in the vessel.

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- (3) The perimeter of a rectangle is 140 cm. and the ratio between its
dimensions is 3 : 4 Find its area.

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- (4) Which is greater in volume , a cuboid whose dimensions are 12 cm. ,
10 cm. and 8 cm. or a cube of edge length 10 cm. ?

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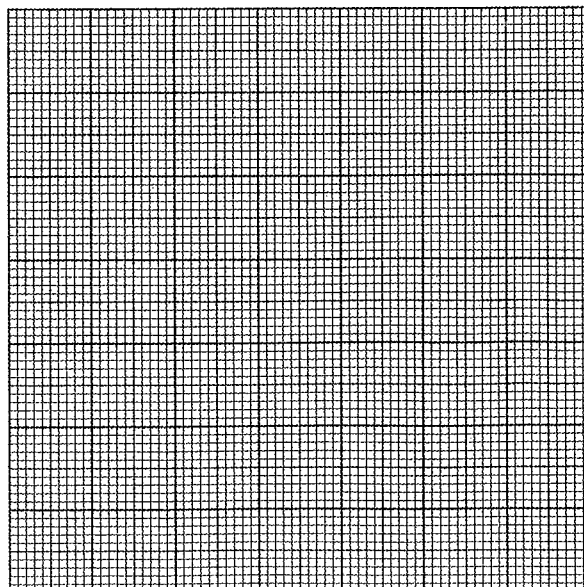
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- (5) The following table shows the number of hours which spent by 40 pupils to
study their lessons daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	3	8	12	11	40

Represent these data using the frequency curve.



3 Giza Governorate

Omrania Educational Zone
El-Shahid (M.M.A) Exp. Lang. Sch.



Answer the following questions :

1 Choose the correct answer :

- (1) The volume of a cube equals 125 cm^3 , then the area of its base =
(5 cm^2 or 25 cm^2 or 125 cm^2 or 100 cm^2)
- (2) $\frac{2}{5} = \dots\dots\dots \%$ (20 or 30 or 40 or 50)
- (3) If $a : b = 3 : 5$ and $b : c = 5 : 7$, then $a : c = \dots\dots\dots$
(2 : 3 or 3 : 4 or 3 : 7 or 8 : 7)
- (4) $1 - 25 \% = \dots\dots\dots$ ($\frac{3}{4}$ or $\frac{1}{4}$ or $\frac{1}{8}$ or $\frac{3}{8}$)
- (5) If the numbers 3 , 5 , x and 20 are proportional , then $x + 3 = \dots\dots\dots$
(6 or 12 or 15 or 21)
- (6) If the drawing length is 6 cm. , and the real length is 6 metres , then the drawing scale = (1 : 10 or 1 : 100 or 1 : 1000 or 1 : 1)

2 Choose the correct answer :

- (1) $\frac{3}{4}$ litre = mL. (0.75 or 7.5 or 750 or 75)
- (2) The two diagonals are perpendicular in
(rectangle or rhombus or triangle or parallelogram)
- (3) The range of the values 7 , 3 , 6 , 9 and 1 is
(8 or 1 or 7 or 0)
- (4) The ratio between Aya's age and Eman's age is 1 : 6 , if Aya's age is 6 years old , then Eman's age is years old. (32 or 36 or 39 or 42)
- (5) If 45% of $x = 90$, then $x = \dots\dots\dots$ (20 or 100 or 200 or 300)
- (6) The ratio between 15 hours and one day in the simplest form =
(1 : 15 or 15 : 1 or 8 : 5 or 5 : 8)

3 Complete :

- (1) The number of axes of symmetry of a parallelogram is
- (2) The two diagonals are equal in length and perpendicular in
- (3) The difference between the maximum value and the minimum value is called
- (4) $12 : 18 : 36 = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$ (in the simplest form).

(5) A rate is

(6) 30 months : 3 years = : (in the simplest form).

(7) If 2 , x , 8 and 20 are proportional , then x =

(8) The drawing scale =

4 Answer the following :

(1) Find the cost price of goods sold for 21 275 pounds with profit percentage 15 %

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(2) A photo was taken for an insect by enlargement ratio 100 : 1 , if the real length is 0.8 cm. Find the length in the picture.

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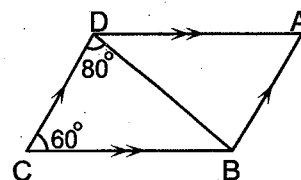
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(3) In the opposite figure :

ABCD is a parallelogram.

Find : [a] $m(\angle ADB)$

[b] $m(\angle A)$



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(4) Which is greater in volume , a cube of edge length 5 cm. or a cuboid of dimensions 3 cm. , 5 cm. and 7 cm. ?

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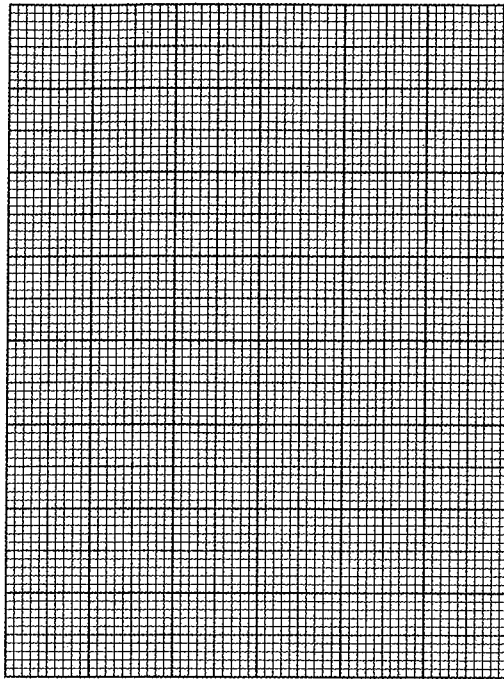
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(5) The following table shows the marks of 100 students in a maths test :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.



4 Alexandria Governorate

West Educational Zone
Maths Supervision



Answer the following questions :

1 Choose the correct answer :

(1) $\frac{1}{2}$ kg. 700 gm. ($<$ or $>$ or $=$ or \geq)

(2) $\frac{3}{4} : \frac{5}{6} = 9 : \dots\dots\dots$ (6 or 10 or 11 or 12)

(3) $\frac{7}{20} = \dots\dots\dots$ (7 % or 20 % or 35 % or 42 %)

(4) The parallelogram is a quadrilateral in which the sum of the measures of any two consecutive angles equals
(90° or 100° or 120° or 180°)

(5) $4 \text{ m}^3 = \dots\dots\dots \text{ dm}^3$ (40 or 400 or 4 000 or 40 000)

(6) If the numbers 4 , x , 12 , 18 are proportional , then $x = \dots\dots\dots$
(6 or 8 or 10 or 12)

(7) 8 hours : 3 days = 1 : (3 or 6 or 9 or 12)

(8) If $\frac{5}{8} = \frac{15}{x}$, then $x = \dots\dots\dots$ (8 or 16 or 24 or 32)

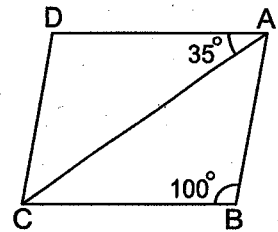
(9) If the distance between two cities on a map is 3 cm. , and the real distance between them is 9 km. , then the drawing scale of the map = 1 :
(3 or 3 000 or 30 000 or 300 000)

(10) If the number of boys in a class is 35 % from the total number of pupils , then the percentage of girls is (35 % or 65 % or 50 % or 55 %)

- (11) The cuboid has six faces each of them is
 (a rectangle **or** a square **or** a rhombus **or** a cube)
- (12) If the marks of 6 students in one exam is 29 , 33 , 57 , 40 , 36 , 49 , then
 the range of these marks = (32 **or** 33 **or** 28 **or** 86)

2 Complete each of the following :

- (1) The volume of a cube of edge length 4 cm. = cm^3
- (2) As comparing between two similar quantities or numbers and of the same unit , then the resultant fraction is called
- (3) The ratio between the circumference of the circle and its diameter length
 = :
- (4) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm.
 , then the drawing scale = :
- (5) In the opposite figure :
 ABCD is a parallelogram
 , then $m(\angle ACD) = \dots\dots\dots^\circ$
- (6) If $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C = \dots\dots\dots : \dots\dots\dots$
- (7) $\frac{\text{The drawing length}}{\text{The real length}} = \dots\dots\dots$
- (8) The maximum mark – The minimum mark =



3 Answer the following :

- (1) If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 ,
 if the weight of Ahmed is 60 kilograms.
 Calculate the weight of Hani.

- (2) If Hazem studies 21 hours weekly , then find the rate of his studying daily.

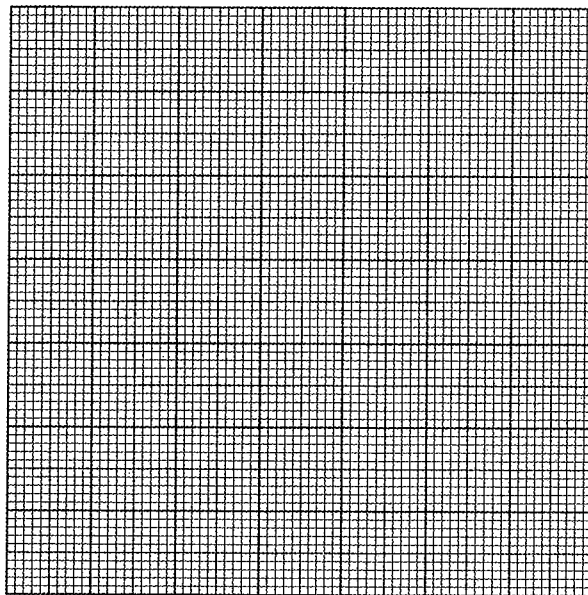
- (3) A cuboid of volume is $2\,128\text{ cm}^3$, its height is 14 cm. Find the area of its base.

- (4) A swimming pool in the shape of a cuboid , whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.
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-

- (5) The following table shows the number of hours which spent by 40 pupils to study their lessons daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	3	8	12	11	40

Represent these data using the frequency curve.



5 El-Kalyoubia Governorate

Banha Educational Zone
Maths Supervision



Answer the following questions :

- 1 Choose the correct answer :

(1) If $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C = \dots\dots\dots$

(3 : 5 or 2 : 5 or 5 : 3 or 5 : 2)

(2) If $\frac{4}{6} = \frac{12}{x}$, then $x + 2 = \dots\dots\dots$

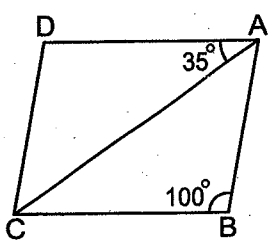
(16 or 18 or 20 or 22)

(3) $\frac{3}{4} = \dots\dots\dots$ (in a decimal form)

(0.2 or 0.25 or 0.5 or 0.75)

(4) A car consumes 20 litres of petrol to cover a distance 250 km. , then the rate of consumption of the car is

(0.08 L./km. or 0.8 L./km. or 8 L./km. or 80 L./km.)

- (5) If the real length of an insect is 0.3 mm. and its length in a picture 4.5 cm. ,
then the drawing scale =
(1 : 15 or 1 : 150 or 150 : 1 or 15 : 1)
- (6) $\frac{3}{10} = \dots\dots\dots$ (300 % or 40 % or 30 % or 0.3 %)
- (7) If the volume of a cuboid is 64 cm^3 and the area of its base 16 cm^2 , then its
height = (4 m. or 0.4 cm. or 4 dm. or 4 cm.)
- (8) In the opposite figure :
ABCD is parallelogram
, then $m(\angle ACD) = \dots\dots\dots$
(35° or 55° or 45° or 60°)
- 
- (9) A cube , the sum of lengths of all edges is 132 cm.
, then its volume =
($1\,771 \text{ cm}^3$ or $1\,331 \text{ cm}^3$ or $1\,444 \text{ cm}^3$ or $299\,968 \text{ cm}^3$)
- (10) In your class , if the percentage of boys is 35 % from the total number of
pupils , then the percentage of the girls in this class =
(65 % or 55 % or 75 % or 35 %)
- (11) The following data are descriptive data except
(favorite color or age or birth place or blood species)
- (12) If the numbers 9 , 21 , 3 , x are proportional , then $x = \dots\dots\dots$
(9 or 8 or 7 or 6)

2 Complete the following :

- (1) ABC is an equilateral triangle where $AB = 5 \text{ cm}$. , then the ratio between AB
and the perimeter of triangle ABC = :
- (2) The range of the set of values 50 , 25 , 35 , 20 is
- (3) An agricultural tractor ploughs 28 feddans in 4 hours , the time which need
to plough 42 feddans is hours.
- (4) The ratio between child's age and his father is 1 : 10 and the age of child is
6 years , then the father's age = years.
- (5) Hasnaa drew a picture for Omar with drawing scale 1 : 40 , if the real height
of Omar is 160 cm. , then the height of Omar in the picture = cm.
- (6) If one angle in a parallelogram is right , then it is called
- (7) $2.65 \text{ litres} = \dots\dots\dots \text{ dm}^3 = \dots\dots\dots \text{ cm}^3$
- (8) 16 kirats : 1 feddan = : (in the simplest form)

3 Answer the following :

- (1) Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 At the end of the year , the profit was L.E. 3 900 Calculate the share of each of them from the profit.

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- (2) A building worker used 1 500 bricks to build a wall , calculate the volume of the wall in m^3 if the brick is in the shape of a cuboid of dimension 25 cm. , 12 cm. , 6 cm.

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- (3) An auto fair owner bought a car for L.E. 45 000 , then he spent L.E. 5 000 for repairing it , then he sold it for L.E. 55 000 Calculate :

[a] The profit after selling.

[b] The percentage of profit.

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- (4) 10 litres of water were poured in a vessel in the shape of a cuboid its base is a square of side length is 25 cm. Find the height of water in the vessel.

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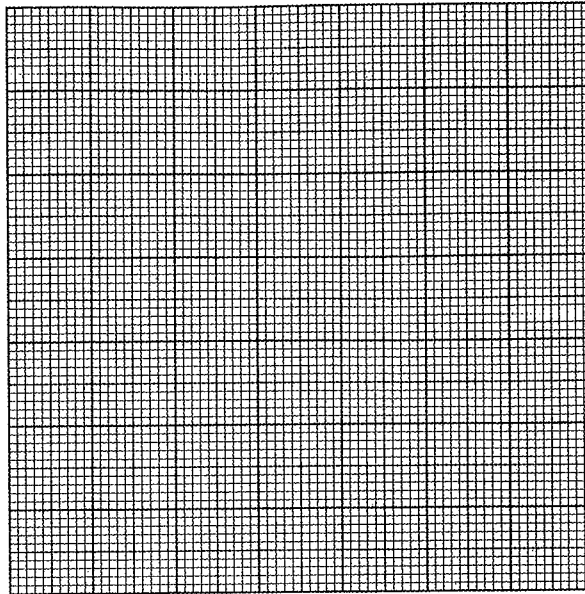
- (5) The following table shows the number of hours which spent by 40 pupils to study their lessons :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	X	8	12	11	40

[a] Find the value of X

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[b] Represent these data using the frequency curve.



6 El-Sharkia Governorate

Belbeis Educational Administration
Al-Rosala Language Schools

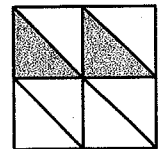


Answer the following questions :

1 Choose the correct answer :

(1) The fraction that represents the shaded part =

($\frac{1}{4}$ or $\frac{3}{4}$ or $\frac{2}{6}$ or $\frac{4}{7}$)



(2) $0.23 \text{ m}^3 = \dots\dots\dots \text{ L}$

(0.23 or 230 or 2.3 or 0.023)

(3) If $\frac{4}{6} = \frac{8}{x}$, then $x + 2 = \dots\dots\dots$

(15 or 14 or 16 or 12)

(4) The ratio between 15 hours , one day =

(1 : 15 or 15 : 1 or 8 : 5 or 5 : 8)

(5) If the range of some values is 40 and the number of sets is 10 , then the length of set =

(5 or 7 or 6 or 4)

(6) All of the following data are quantitative except

(tallness or age or name or phone number)

(7) The number of angles in the following shape =

(1 or 2 or 3 or 4)




(8) The range of the values 29 , 33 , 57 , 40 , 36 is

(27 or 28 or 29 or 24)

- (9) If 10 A , 2 , 2 A , B are proportional , then B =
(0.2 or 0.4 or 0.5 or 0.3)
- (10) If x , 16 , 6 , 8 are proportional , then x =
(1 or 6 or 8 or 12)
- (11) 6.5 L. = dm^3 (56 or 6.5 or 5 600 or 56 000)
- (12) If a car covered 180 km. in three hours , then the velocity of this car
= km./hr. (80 or 60 or 50 or 20)

2 Complete the following :

- (13) $\frac{5}{4} : 2 = \dots : \dots$ (in the simplest form)
- (14) If the lower limit of the set = 10 and the upper limit = 30 , then its centre =
- (15) The ratio between the width and the length of a rectangle is 3 : 4 , then
length : perimeter =
- (16) An amount of money is divided between two persons in the ratio 5 : 6 , then
what the first took = the total.
- (17) $1 - (24 \% + 35 \%) = \dots \%$
- (18) If the drawing scale < 1 , its represents
- (19) Discover the pattern and write the description of  is
- (20) The range of values (6 , 2 , 7 , x) is 9 , then x =

3 Answer the following questions :

- (21) In a school , if the number of students is 560 students , if the number of girls $\frac{3}{5}$ of boys , find the number of each of boys and girls.

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- (22) Ahmed drew a picture of his brother Osama by drawing scale 1 : 40 , if the real length is 160 cm. Find the drawing length.

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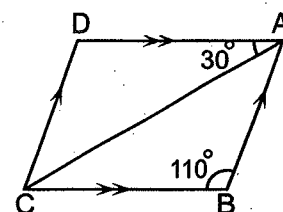
- (23) A cube of cheese , its edge length is 15 cm. , it is wanted to be divided it into small cubes , the edge length of each is 3 cm. for presenting them through meals. Calculate the number of the resulting small cubes.

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- (24) The opposite figure shows a parallelogram in which $m(\angle B) = 110^\circ$ and $m(\angle DAC) = 30^\circ$
Find : $m(\angle D)$, $m(\angle BAC)$ and $m(\angle ACD)$



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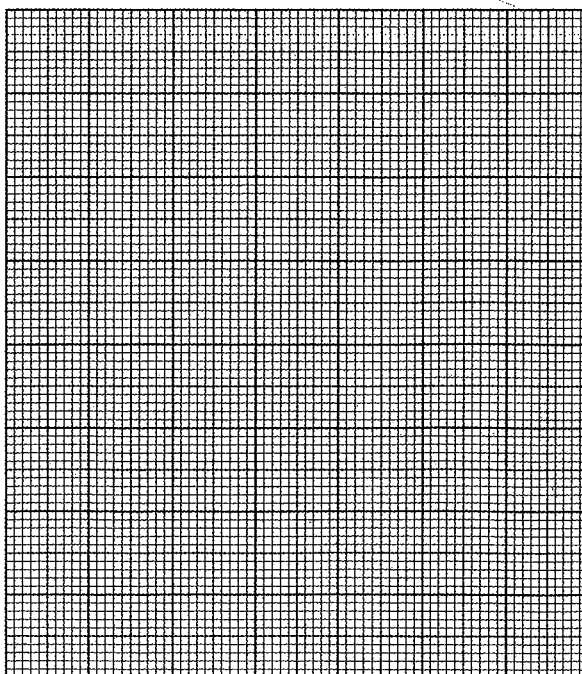
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- (25) The following table shows a sample of patients who suffer from a certain disease in a hospital due to the hours which were spent till they became healthy :

Number of hours	1 –	2 –	3 –	4 –	5 –	6 –	Total
Number of patients	7	11	15	6	4	2	45

Represent these data by a frequency curve.



7

El-Monofia Governorate

Shiben El-Kom Educational Directorate
Maths Department



Answer the following questions :

1 Choose the correct answer :

(1) The following data are descriptive data except

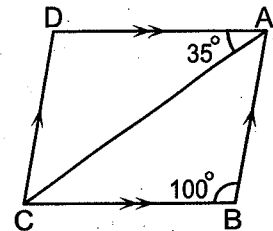
(favorite color **or** age **or** birth place **or** blood species)

(2) In the opposite figure :

ABCD is parallelogram

, then $m(\angle ADC) = \dots\dots\dots$

(35° **or** 45° **or** 100° **or** 135°)



(3) If the numbers 3 , 5 , x and 20 are proportional , then $x = \dots\dots\dots$

(6 **or** 12 **or** 15 **or** 21)

(4) If one of angles of the parallelogram is right , then the resulting figure is

a

(rectangle **or** square **or** rhombus **or** cube)

(5) If an agriculture tractor ploughs 28 feddans in 4 hours , then the time

needed to plough 42 feddans is hours. (4 **or** 6 **or** 7 **or** 8)

(6) $\frac{5}{4} : 3 \frac{1}{4} = \dots\dots\dots$

(5 : 13 **or** 1 : 3 **or** 3 : 1 **or** 5 : 9)

(7) The sum of edge lengths of a cube is 24 cm. , then its volume = cm^3

(2 **or** 8 **or** 12 **or** 24)

(8) 25 % of 1 000 =

(2 000 **or** 1 500 **or** 250 **or** 500)

(9) The ratio between 250 grams and $\frac{1}{2}$ kg. =

(2 : 1 **or** 2 : 3 **or** 1 : 2 **or** 3 : 2)

(10) A machine produces 600 metres of clothes regularity in one hour and half ,
then the rate of production in metre per hour = metre/hour

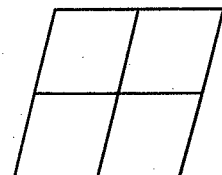
(500 **or** 400 **or** 300 **or** 200)

(11) In the opposite figure :

The number of parallelograms

which can be obtained is

(4 **or** 5 **or** 7 **or** 9)



(12) The following in this pattern $\triangle \bigcirc \bigcirc \square \triangle \bigcirc \bigcirc$ is

(\triangle **or** \bigcirc **or** \square **or** \diamond)

2 Complete :

- (1) $\frac{1}{4} = \dots\dots\dots \%$
- (2) If the dimensions of cuboid are equal in length , then it is called a
- (3) The range of the set of the values 7 , 3 , 15 and 8 is
- (4) The ratio between the side length of the square and its perimeter
= :
- (5) If $\frac{4}{6} = \frac{12}{x}$, then $x - 2 = \dots\dots\dots$
- (6) $1\,500\text{ dm}^3 = \dots\dots\dots$ litres
- (7) If the real length of an insect is 0.5 millimetres and its length in the picture is 4.5 cm. , then its drawing scale = :
- (8) If $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C = \dots\dots\dots : \dots\dots\dots$

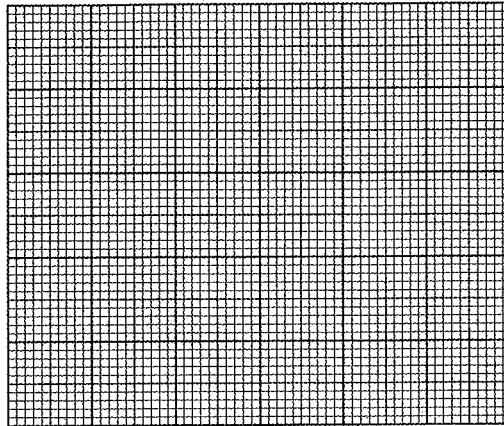
3 Answer the following :

- (1) Heba bought a vacuum cleaner for 220 pounds with a discount 20 %
Calculate the price before discount.
.....
.....
.....
.....
- (2) If the ratio between Hadir's weight and Basma's weight is 5 : 6 and the difference between their weights is 10 kg. Calculate the weight of each of them.
.....
.....
.....
.....
- (3) In a metallic cube whose edge length is 12 cm. we want to melt and convert it to a number of cuboid alloys of dimensions 3 cm. , 4 cm. and 6 cm.
Calculate the number of alloys which can be obtained.
.....
.....
.....
- (4) A container has 12 litres of oil. We need to distribute it on small bottles with each one of the capacity 400 cm^3 Calculate the number of the needed bottles.
.....
.....

(5) The following table shows the marks of 100 pupils in mathematics :

Marks	10 –	20 –	30 –	40 – 50	Total
No. of pupils	15	40	30	15	100

Draw the frequency curve for this distribution.



8 El-Gharbia Governorate

El-Gharbia Educational Directorate
Maths Supervision



Answer the following questions :

1 Choose the correct answer :

- (1) If $\frac{4}{6} = \frac{12}{x}$, then $x + 2 = \dots\dots\dots$ (16 or 18 or 20 or 22)
- (2) The following data are descriptive data except $\dots\dots\dots$
(favorite color or age or birth place or blood species)
- (3) The volume of a cube is 27 cm^3 , then the perimeter of its base equals $\dots\dots\dots$ cm.
(36 or 24 or 27 or 12)
- (4) The ratio between the circumference of the circle and its diameter length
= $\dots\dots\dots$: $\dots\dots\dots$ ($\pi : 1$ or $2\pi : 1$ or $1 : 4$ or $\pi : d$)
- (5) If the volume of a cuboid = 300 cm^3 , its base area = 25 cm^2 , then its
height = $\dots\dots\dots$ cm. (12 or 13 or 14 or 15)
- (6) If the range is 40 and the length of the set is 5, then the number of sets
= $\dots\dots\dots$ (5 or 6 or 7 or 8)
- (7) If one angle of the parallelogram is right and its sides are equal in length, then
it is called $\dots\dots\dots$ (square or rhombus or triangle or rectangle)
- (8) $1 - (35 \% + 25 \%) = \dots\dots\dots$ ($\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{4}$)

- (9) The diagonals are perpendicular and have the same length in the
(square **or** rectangle **or** trapezium **or** parallelogram)
- (10) $1.45 \text{ litres} + 0.5 \text{ dm}^3 = \dots\dots\dots \text{ litres.}$ (1.5 **or** 1.95 **or** 1.55 **or** 6.5)
- (11) The percentage is a ratio , which its second term is
(10 **or** 100 **or** 1 000 **or** 10 000)
- (12) How many bottles of 750 mL. each can be filled with 30 litres of water ?
(4 **or** 40 **or** 400 **or** 4 000)
- (13) $\frac{1}{8} \text{ day} : 6 \text{ hours} : \frac{1}{2} \text{ day} = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$
(1 : 2 : 6 **or** 1 : 2 : 4 **or** 1 : 2 : 3 **or** 3 : 2 : 1)
- (14) 12 % of 500 kg. = kg. (40 **or** 50 **or** 60 **or** 70)

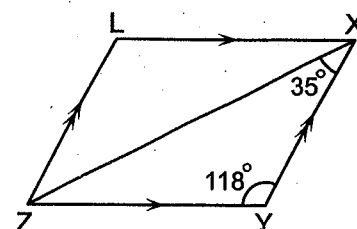
2 Complete the following :

- (15) If the ratio between measures of the angles of triangle is 5 : 6 : 7 , then the measure of the greatest angle = °
- (16) 16 kirats : 1 feddan = : (in the simplest form)
- (17) 2.65 litres = dm^3
- (18) $\frac{7}{20} = \dots\dots\dots \%$
- (19) If the ratio $a : b = 4 : 3$ and the ratio $b : c = 2 : 3$, then the ratio $a : b : c = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$
- (20) If the sum of lengths of all edges of a cube is 132 cm. , then its volume = cm^3
- (21) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = :
- (22) If Hassan spends L.E. 45 within three days , then the rate of what Hassan spends per day is

3 Answer the following :

(23) In the opposite figure :

XYZL is a parallelogram in which
 $m(\angle Y) = 118^\circ$, $m(\angle YXZ) = 35^\circ$
 Find : $m(\angle L)$, $m(\angle LXZ)$



.....

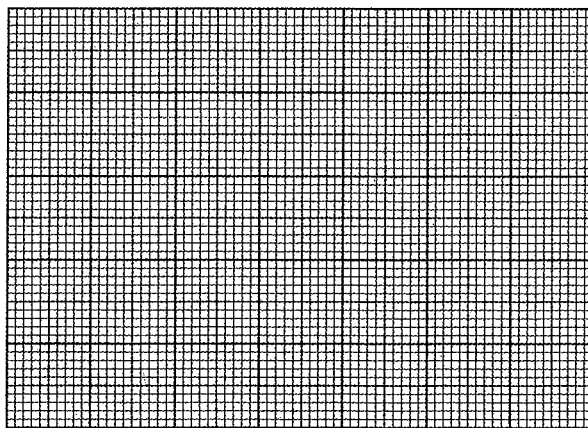
- (24) A metallic cube of edge length 12 cm. , it needs to be converted into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.
-
-
-

- (25) Three persons shared in business. The first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds. At the end of the year the net profit was 5 520 pounds. Calculate the share of each of them.
-
-
-
-

- (26) The following table shows the marks of 100 students in one month in maths :

Marks	20 –	30 –	40 –	50 –	Total
Number of students	15	30	40	15	100

Draw the frequency curve for this distribution.



9 El-Dakahlia Governorate

Maths Supervision



Answer the following questions :


- 1 Choose the correct answer :

- (1) The ratio between the length of diameter of circle and its circumference is (1 : 1 or 1 : 4 or 1 : π or π : 1)
- (2) is a ratio between two different quantities.

(Ratio or Proportion or Rate or Drawing scale)

- (3) $\frac{x}{5} = 60\%$, then $x + 3 = \dots\dots\dots$ (3 or 6 or 600 or 30)
- (4) $\frac{1}{2} : \frac{3}{4} : \frac{2}{3} = \dots\dots\dots$ (6:8:9 or 8:9:6 or 9:6:8 or 6:9:8)
- (5) If the drawing scale > 1 , then this expresses $\dots\dots\dots$
(magnification or reduction or congruent or otherwise)
- (6) If the number of sets is 8 and length of set is 5 , then the range = $\dots\dots\dots$
(3 or 13 or 40 or 6)
- (7) 20 % of a number = $\dots\dots\dots$ % of half the same number.
(10 or 20 or 30 or 40)
- (8) Volume of a cube whose sum of edge lengths of two adjacent faces is 56 cm.
is $\dots\dots\dots \text{cm}^3$ (512 or 7 or 8 or 343)
- (9) Parallelogram with equal diagonals in length is called $\dots\dots\dots$
(trapezium or rectangle or rhombus or square)
- (10) If the radius length of a circle increases by the ratio 5 % , then the diameter
length increases by ratio $\dots\dots\dots$ (5 % or 10 % or 15 % or 5)
- (11) All of the following data are descriptive except $\dots\dots\dots$
(address or qualifications or age or birth place)
- (12) A car consumes 4 litres of fuel to cover distance 100 km. , then the rate of
consumption is $\dots\dots\dots$ litre per km. (25 or 0.4 or 0.04 or 400)

2 Complete :

- (1) In parallelogram ABCD , $m(\angle A) + m(\angle C) = 140^\circ$, then $m(\angle B) = \dots\dots\dots^\circ$
- (2) The volume of cuboid with dimensions 10 cm. , 8 cm. and 7 cm. = $\dots\dots\dots \text{cm}^3$
- (3) Age , birth date and weight are called $\dots\dots\dots$ data.
- (4) $1.5 \text{ litre} + 0.35 \text{ dm}^3 + 150 \text{ cm}^3 = \dots\dots\dots \text{cm}^3$
- (5) If $A = \frac{1}{2} B$, then $B : A = \dots\dots\dots \%$
- (6)  $\dots\dots\dots$ (in the same pattern)
- (7) If the length of an insect is 3 mm. , if its length in the picture is 6 cm. , then
the ratio of magnification is $\dots\dots\dots$
- (8) The area of a triangle = $\dots\dots\dots$

3 Answer the following :

- (1) If the number of pupils in a school is 630 pupils , if the ratio between the number of boys and the number of girls is 5 : 4 Find the number of each.

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- (2) A map is drawn with scale 1 : 400 000 , if the distance between two cities is 12 km. Find the distance between them on the map.

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- (3) A trader bought a TV set by L.E. 4 500 and sold it with profit 10 % Find the selling price.

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.....

- (4) A box in a cuboid shape with square base its side length is 40 cm. and height 30 cm. is filled by bars of soaps in a cuboid shape with dimensions 6 cm. , 4 cm. and 5 cm. Find the greatest number of soaps can be put in the box.

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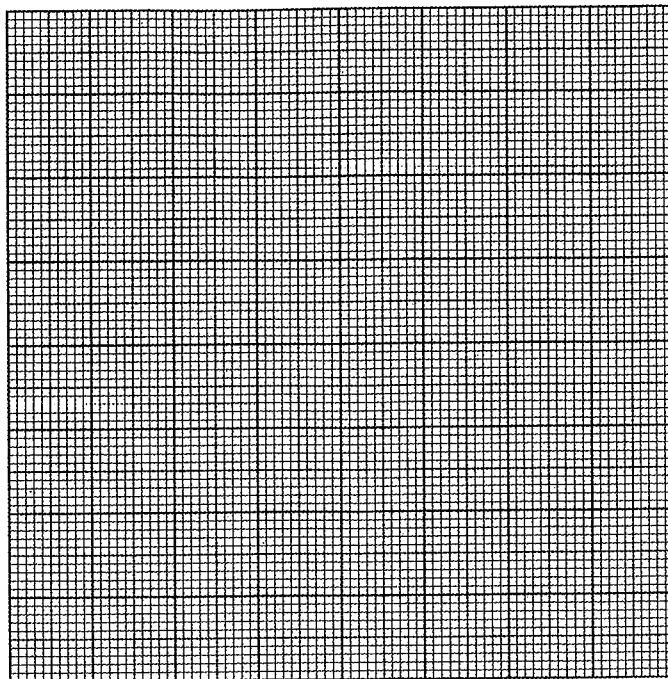
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- (5) The following table shows the number of hours which 50 pupils spend to study their lessons daily :

Number of hours	1 –	3 –	5 –	7 –	9 – 11	Total
Number of pupils	6	10	14	12	8	50

Represent these data by using a frequency curve.



10 Ismailia Governorate

South Ismailia Educational Zone
Suez Canal Language School



Answer the following questions :

1 Choose the correct answer :

(1) If $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C = \dots\dots\dots$

(2 : 5 **or** 3 : 6 **or** 2 : 3 **or** 5 : 2)

(2) If $\frac{2}{5} = \frac{x}{15}$, then $x = \dots\dots\dots$

(2 **or** 5 **or** 6 **or** 15)

(3) The following data are descriptive data except $\dots\dots\dots$

(favorite colour **or** age **or** birth place **or** blood species)

(4) If the number 2 , 7 , x and 21 are proportional , then $x = \dots\dots\dots$

(6 **or** 21 **or** 12 **or** 7)

(5) If the real length of a tree is 6 m. and its drawing , length is 3 cm. , then the drawing scale = $\dots\dots\dots : \dots\dots\dots$

(1 : 100 **or** 1 : 200 **or** 1 : 300 **or** 1 : 600)

(6) $0.3 \text{ m}^3 = \dots\dots\dots \text{ dm}^3$

(3 000 **or** 300 **or** 30 **or** 3)

(7) If the volume of a cuboid equals 315 cm^3 , its base with length 9 cm. and width 7 cm. , then its height = $\dots\dots\dots \text{ cm}$.

(7 **or** 5 **or** 63 **or** 45)

(8) The two diagonals are equal in length and perpendicular in $\dots\dots\dots$

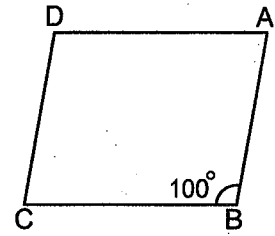
(rectangle **or** rhombus **or** triangle **or** square)

(9) $\frac{4}{5} = \dots\dots\dots\%$ (50 or 60 or 70 or 80)

(10) If Hany drinks 21 glasses of milk weekly , then he drinks $\dots\dots\dots$ glasses of milk every 3 days. (3 or 6 or 9 or 12)

(11) $\frac{1}{2}$ kg. : 700 gm. = $\dots\dots\dots$ (2 : 7 or $\frac{7}{8}$ or $\frac{5}{7}$ or $\frac{7}{9}$)

(12) In the opposite figure :
ABCD is a parallelogram , then :
 $m(\angle D) = \dots\dots\dots^\circ$



(100 or 60 or 80 or 70)

2 Complete :

(1) The range of the set of values 7 , 3 , 6 , 9 and 5 is $\dots\dots\dots$

(2) If the drawing scale < 1 , then this expresses $\dots\dots\dots$

(3) A cuboid of dimensions 5 cm. , 6 cm. and 2 cm. , its volume is $\dots\dots\dots\text{cm}^3$

(4) $1.5 \text{ litres} + 0.5 \text{ dm}^3 + 500 \text{ cm}^3 = \dots\dots\dots \text{litres.}$

(5) $1 - (15\% + 45\%) = \dots\dots\dots\%$

(6) $\frac{1}{4} : \frac{1}{3} : \frac{1}{2} = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$ (in the simplest form)

(7) The number of pupils in a primary school is 360 pupils , if the ratio between the number of boys and the number of girls is 1 : 2 , then the number of boys = $\dots\dots\dots$

(8) If the edge length of a cube = 4 cm. , then the volume = $\dots\dots\dots\text{cm}^3$

3 Answer the following :

(1) If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit.
Calculate the selling price.

.....

.....

.....

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- (2) Three persons started a business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year the profit was 5 520 pounds. Calculate the share of each of them.

.....

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- (3) 10 litres of water were poured in a vessel in the shape of a cuboid its base is a square base of side length 25 cm. Find height of the water in the vessel.

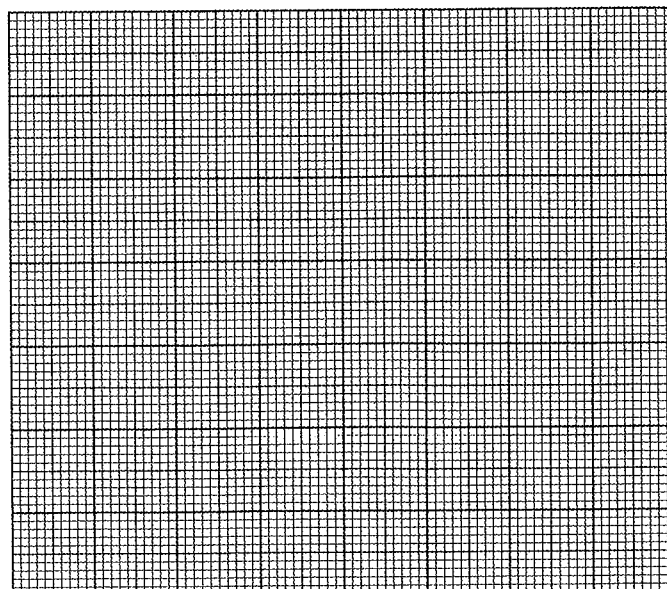
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- (4) The following table shows of money in pounds paid by a group of contributors in a charity :

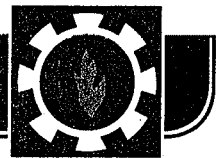
The sum	50 –	60 –	70 –	80 –	90 –	100 –
Number of contributors	5	7	10	12	10	7

Draw the frequency curve of this distribution.



11 Suez Governorate

South Educational Directorate
Maths Inspection



Answer the following questions :

1 Choose the correct answer :

(1) $\frac{2}{5} : \frac{7}{2} = \dots\dots\dots : \dots\dots\dots$ (5 : 7 or 4 : 35 or 2 : 7 or 5 : 2)

(2) In the parallelogram , the sum of the measures of any two consecutive angles = $\dots\dots\dots^\circ$ (45 or 90 or 180 or 360)

(3) The percentage is a ratio its second term is $\dots\dots\dots$ (10 or 100 or 200 or 1 000)

(4) 39 days \approx $\dots\dots\dots$ weeks. (4 or 5 or 6 or 7)

(5) The ratio between the length of the side of the equilateral triangle and its perimeter = $\dots\dots\dots : \dots\dots\dots$ (1 : 3 or 3 : 1 or 4 : 1 or 1 : 4)

(6) Cuboid of dimensions (5 cm. , 2 cm. , 7 cm.) , its volume = $\dots\dots\dots \text{cm}^3$ (24 or 48 or 65 or 70)

(7) The following data are descriptive data except $\dots\dots\dots$
(favorite colour or birth place or age or blood species)

(8) If $\frac{x}{5} = 40\%$, then $x = \dots\dots\dots$ (2 or 4 or 5 or 8)

(9) $3 \text{ m}^3 = \dots\dots\dots$ litres. (300 or 3 000 or 300 000 or 3 000 000)

(10) $\frac{3}{4} = \dots\dots\dots\%$ (25 or 50 or 57 or 75)

(11) An iron with price L.E. 120 at 20 % discount , the price after discount = L.E. $\dots\dots\dots$ (90 or 96 or 100 or 140)

(12) If the length of an insect in the picture is 4 cm. and its real length is 2 mm. , the drawing scale is $\dots\dots\dots : \dots\dots\dots$
(2 : 1 or 1 : 2 or 20 : 1 or 1 : 20)

2 Complete the following :

(1) Half km. : 250 metres = $\dots\dots\dots : \dots\dots\dots$ (in the simplest form)

(2) The range of the set of values 7 , 3 , 6 , 9 and 5 is $\dots\dots\dots$

(3) If $A : B = 3 : 4$, $B : C = 4 : 5$, then $A : C = \dots\dots\dots : \dots\dots\dots$

(4) The drawing scale = $\frac{\dots\dots\dots}{\text{The real length}}$

- (5) The two diagonals are equal in length in each of ,
- (6) 6 , 8 , 3 , (Complete the missing number to be proportional)
- (7) $\frac{1}{2} : \frac{1}{3} = \dots : \dots$ (in the simplest form)
- (8) Cuboid of volume is $1\,400\text{ cm}^3$, its height is 14 cm. , the area of its base = cm^2

3 Answer the following questions :

- (1) Hassan spends L.E. 45 within 3 days , what is the rate of what Hassan spends per day ?
.....
- (2) A vessel in the shape of a cube with edge length 30 cm. is filled with honey. Calculate the capacity of the vessel.
.....
.....
- (3) In one of our schools , there are 560 students , if the number of girls is $\frac{3}{5}$ the number of boys. Find each of the number of boys and girls.
.....
.....
.....

(4) In the opposite figure :

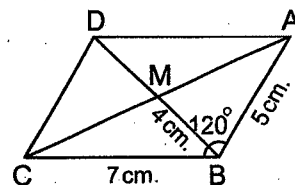
ABCD is a parallelogram in which

$AB = 5\text{ cm.}$, $BC = 7\text{ cm.}$

$BM = 4\text{ cm.}$, $m(\angle ABC) = 120^\circ$

Without using geometrical instruments

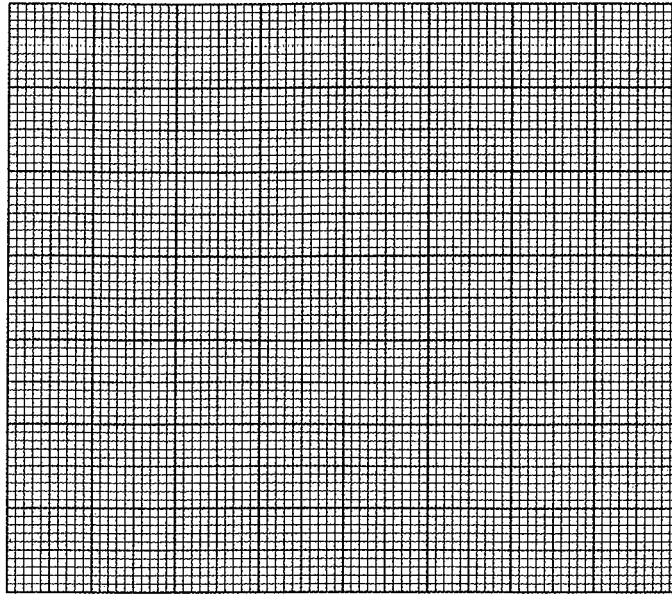
, find $m(\angle ADC)$ and the perimeter of $\triangle BCD$
.....
.....



- (5) The following table shows the number of hours which the pupils of a class spend daily in front of the computer :

Number of hours	- 1	- 2	- 3	- 4	- 5	- 6	Total
Number of pupils	8	10	12	6	4	2	42

Represent these data by a frequency curve.



12 Port Said Governorate

Maths Inspector



Answer the following questions :

1 Choose the correct answer :

(1) $\frac{2}{3} : 3 \frac{1}{3} = \dots\dots\dots$ (1 : 2 or 1 : 3 or 2 : 3 or 1 : 5)

(2) The centimetre cube is a unit of measuring the
(length or area or volume or weight)

(3) 18 kirats : 2 feddans = (1 : 2 or 3 : 8 or 1 : 24 or 18 : 2)

(4) If Heba bought a mobile phone for 900 pounds with a discount 10 % , then
the price of the mobile phone before the discount is pounds.
(9 000 or 1 000 or 990 or 100)

(5) If the drawing scale < 1 , this expresses
(equality or maximization or enlargement or minimization)

(6) A wooden box in the form of a cube , its external volume is $1\,000\text{ cm}^3$ and
its capacity is 729 cm^3 , then the volume of wood of the box = cm^3
(0.729 or 1 729 or 271 or 729 000)

(7) The diagonals are perpendicular in
(rectangle or trapezoid or rhombus or parallelogram)

(8) The ratio between the side length of the square to its perimeter is
(1 : 2 or 1 : 3 or 4 : 1 or 1 : 4)

- (9) If the ratio among the measurements of the angles of a triangle is $1 : 2 : 3$, then the measurement of the smallest angle is °
(10 or 20 or 30 or 60)
- (10) $1 \frac{3}{4} = \dots\dots\dots \%$ (25 or 50 or 75 or 175)
- (11) If one angle of parallelogram is right , then it is called
(rectangle or trapezoid or rhombus or rhombus)
- (12) The following data are descriptive data except
(age or birth place or blood species or favourite colour)

2 Complete the following :

- (1) The range of the set of values 8 , 1 , 9 , 11 and 7 is
- (2) The agricultural tractor ploughs 28 feddans in 4 hours , then the time which needed to plough 42 feddans is hours.
- (3) If the height of the fence of the villa in the design is 5 cm. and its real height is 5 metres , then the drawing scale is :
- (4) 5 000 grams : 8 kilograms = : (in the simplest form).
- (5) If $A : B = 1 : 2$, $B : C = 2 : 5$, then $A : C = \dots\dots\dots$:
- (6) A cube of edge length 5 cm. , then its volume = cm^3 .
- (7) If $\frac{2}{5} = \frac{x}{20}$, then $x = \dots\dots\dots$
- (8) If the volume of a cuboid is 64 cm^3 and the area of its base is 16 cm^2 , then its height = cm.

3 Answer the following :

- (1) In the opposite figure :

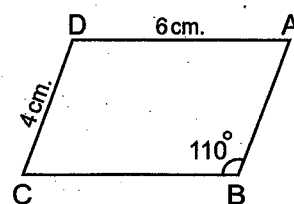
ABCD is a parallelogram , find :

[a] $m(\angle D)$

[b] $m(\angle A)$

[c] The length of \overline{AB}

[d] The perimeter of the shape ABCD



(2) If the buying price of electric sets is L.E. 72 000 and sold at 15 % profit.

Calculate the selling price.

.....

.....

(3) A cuboid tin with inner dimensions 2 dm. , 3 dm. and 4 dm. was full of honey.

Calculate the price of honey , given that the price of one litre is L.E. 20

.....

.....

(4) In one of our schools , there are 1 000 students , if the ratio between the number of boys and the number of girls is 2 : 3 , find each of the number of boys and girls.

.....

.....

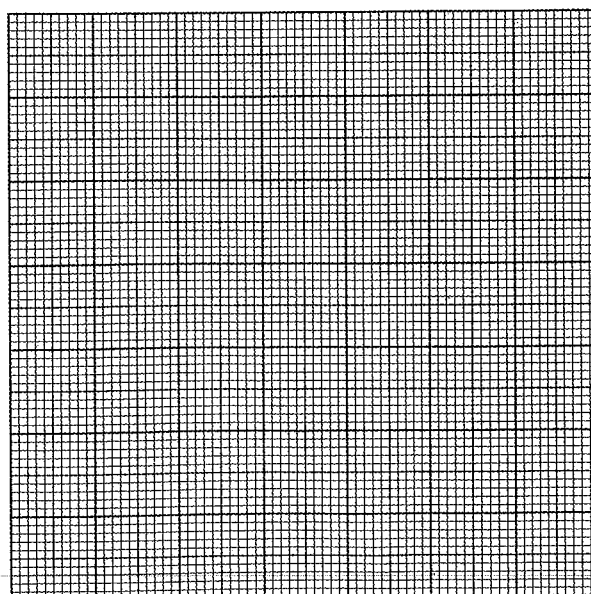
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(5) The following table shows the marks of 50 students in one month in maths :

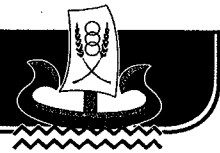
Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	6	10	20	14	50

Represent these data by the frequency curve.



13 Kafr El-Sheikh Governorate

Maths Inspection



Answer the following questions :

1 Choose the correct answer between brackets :

- (1) If the values in the frequency distribution lies between (40 , 90) , then the range of this distribution = (130 or 50 or 80 or 180)
- (2) If 5 , 6 , x and 12 are proportional numbers , then x = (8 or 12 or 5 or 10)
- (3) An agricultural machine ploughs 17 feddans in 8.5 hours , then the rate of performance of the machine = feddans/hour (2 or 4 or 2.5 or 4.5)
- (4) If $a : b = 50 \%$ and $b : c = 2 : 3$, then $a : c =$ (1 : 2 or 2 : 3 or 2 : 6 or 3 : 1)
- (5) If the volume of a cuboid equals 360 cm^3 , its length is 9 cm. and its width is 8 cm. , then its height = cm. (5 or 40 or 48 or 72)
- (6) If one angle of the parallelogram is right angle , and has two adjacent sides are equal in length , then it is called (trapezium or square or rectangle or rhombus)
- (7) The ratio between the side length of the square and its perimeter = (4 : 1 or 1 : 4 or 1 : 3 or 1 : 6)
- (8) If the drawing scale < 1 , then it expresses (enlargement or congruency or reduction or equivalent)
- (9) $4.250 \text{ cm}^3 =$ mm^3 (4 250 or 42.5 or 0.425 or 4.25)
- (10) $3 \frac{4}{7} : 3 \frac{1}{8} =$ (7 : 8 or 8 : 7 or 1 : 4 or 1 : 1)
- (11) If the price of some goods is L.E. 256 and if the price became L.E. 192 during the discount , then the percentage of the discount equals (16 % or 75 % or 33 % or 25 %)
- (12) ABCD is a parallelogram , then $m(\angle A) + m(\angle B) =$ ° (90 or 108 or 180 or 360)

2 Complete each of the following :

(13) Emad sold a flat with profit 5 % , if his profit was L.E. 7 500 , then the selling price of the flat is L.E.

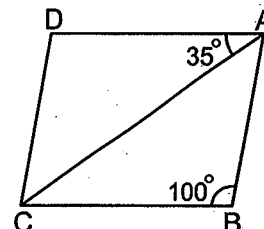
(14) $32 \% + 27 \% + \dots \% = 1$

(15) $\frac{1}{2} : \frac{1}{3} : \frac{1}{4} = \dots : \dots : \dots$ (in the simplest form)

(16) In the opposite figure :

ABCD is a parallelogram , then

$m(\angle ACD) = \dots^\circ$



(17) If the drawing scale is 1 : 500 000 and a road of real length 12.5 km. , then the length of the road on the map is cm.

(18) The volume of a cuboid is 64 cm^3 and the area of its base is 16 cm^2 , then its height = cm.

(19) The following figure in the pattern  is

(20) The following table shows the marks of 40 students in a test , then the number of students who got less than 30 marks =

Marks	10 –	20 –	30 – 40
Number of students	10	13	17

3 Answer the following :

(21) A cube of cheese with edge length 15 cm. , it is wanted to divide it into small cuboids each of dimensions 3 cm. , 5 cm. and 1 cm. Find the number of resulting small cuboids of cheese.

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(22) The ratio between the measures of two consecutive angles in a parallelogram is 4 : 5 Find the measure of each of them.

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- (23) Three persons shared in a business , the first paid L.E. 60 000 , the second paid L.E. 80 000 and the third paid L.E. 90 000 At the end of the year the profit was L.E. 20 700 Find the share of each one.

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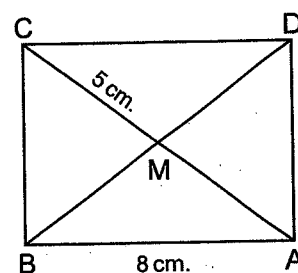
- (24) In the opposite figure :

ABCD is a rectangle in which $AB = 8$ cm.

and $MC = 5$ cm. Find :

[a] Length of \overline{AM} [b] Length of \overline{DB}

[c] Perimeter of $\triangle AMB$



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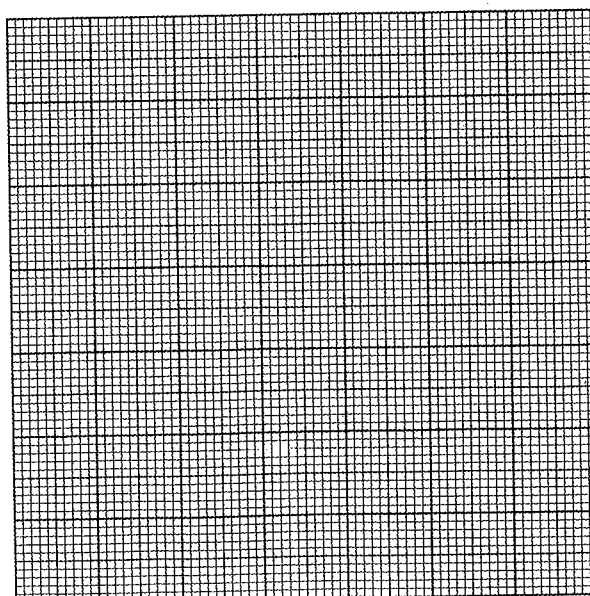
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- (25) The following table shows the marks of 30 pupils in mathematics :

Marks	10 –	20 –	30 –	40 –	Total
Number of students	5	7	10	8	30

Draw the frequency curve for this distribution.



14 El-Beheira Governorate

Rashid Educational Zone
Rashid Language School



Answer the following questions :

1 Choose the correct answer :

(1) $1 \frac{3}{4} = \dots\dots\dots \%$ (25 or 50 or 75 or 175)

(2) If 6 , 8 , 3 and x are proportional numbers , then $x = \dots\dots\dots$
(2 or 4 or 18 or 24)

(3) $6\,500\text{ dm}^3 = \dots\dots\dots \text{m}^3$ (6.5 or 65 or 605 or 650)

(4) $\frac{1}{2} : \frac{1}{3} = \dots\dots\dots : \dots\dots\dots$ (1 : 1 or 2 : 3 or 3 : 2 or 3 : 1)

(5) The ratio between the side length of the square and its perimeter
 $= \dots\dots\dots : \dots\dots\dots$ (1 : 1 or 1 : 3 or 1 : 4 or 4 : 1)

(6) The diagonals are perpendicular and equal in length in
(parallelogram or rectangle or rhombus or square)

(7) If the height of the fence of the villa in the design is 5 cm. and its real height is 5 metres , then the drawing scale is :
(1 : 1 or 1 : 10 or 1 : 100 or 1 : 1 000)

(8) The percentage is a ratio which its second term is
(10 or 100 or 1 000 or 0.01)


(9) The volume of a cube of edge length 3 cm. = cm^3
(8 or 27 or 64 or 125)

(10) If $a : b = 2 : 3$ and $b : c = 3 : 5$, then $a : c = \dots\dots\dots : \dots\dots\dots$
(2 : 5 or 3 : 5 or 5 : 2 or 5 : 3)

(11) If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 and the weight of Ahmed is 60 kg. , then the weight of Hani = kg.
(40 or 50 or 60 or 10)

(12) The opposite data are quantitative data except
(weight or age or temperature degrees or blood species)

2 Complete the following :

- (13) The proportion is
- (14) 3 000 gm. : 5 kg. = : (in the simplest form)
- (15) If the drawing scale < 1 , then this expresses
- (16) The following figure in this pattern  is
- (17) The volume of a cuboid with a squared base of side length 6 cm. and its height is 10 cm. = cm^3
- (18) If the percentage of the number of girls in a class which mixed is 67 % , then the percentage of the number of boys in this class =
- (19) A computer colour printer prints 12 papers each 4 minutes , then the rate of work of this printer = papers/minutes
- (20) The range of the set of values 7 , 3 , 6 , 9 and 5 is

3 Answer the following :

- (21) A primary school has 540 pupils. If the ratio between the number of boys to the number of girls is 4 : 5 , calculate the number of each boys and girls.

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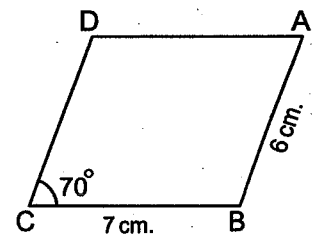
(22) In the opposite figure :

ABCD is a parallelogram in which $AB = 6 \text{ cm.}$
 $, BC = 7 \text{ cm.}$ and $m(\angle C) = 70^\circ$

Find :

[a] $m(\angle D) = \dots\dots\dots$

[b] $AD = \dots\dots\dots \text{ cm.}$



- (23) A company for selling the electric sets. It shows TV set for L.E. 2 100 , if the percentage of the profit is 12 % Find the buying price of TV set.

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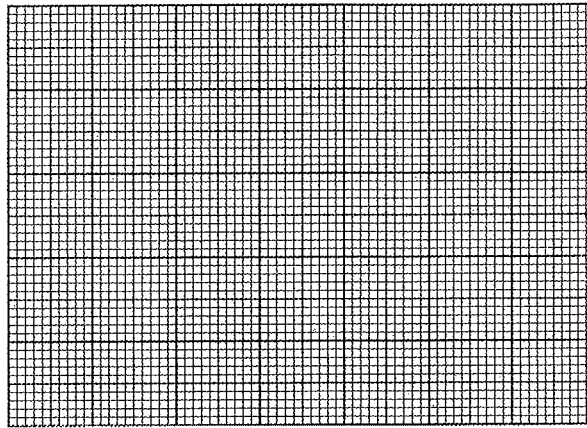
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- (24) A container has 12 litres of honey. It is wanted to put them in smaller bottles , the capacity of each of them is 400 cm^3 . Calculate the number of bottles which is needed for that.
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- (25) The following table shows the marks of students in one month in math :

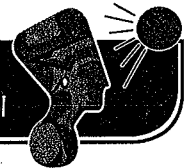
Marks	10 –	20 –	30 –	40 – 50	Total
Numbers of students	5	15	20	10	50

Represent these data using the frequency curve.



15 El-Menia Governorate

El-Menia Educational Zone
Kafr El-Mansorah Formal Languages Primary School



Answer the following questions :

- 1 Choose the correct answer :

- (1) If $3a = 4b$, then $\frac{a}{b} = \dots\dots\dots$ ($\frac{3}{4}$ or $\frac{2}{3}$ or $\frac{4}{3}$ or $\frac{3}{2}$)
- (2) If $\frac{4}{6} = \frac{12}{x}$, then $x + 2 = \dots\dots\dots$ (16 or 18 or 20 or 22)
- (3) 300 grams : $1\frac{1}{2}$ kilogram = $\dots\dots\dots$: $\dots\dots\dots$
(1 : 3 or 1 : 5 or 10 : 1 or 10 : 30)
- (4) $1 - (35 \% + 25 \%) = \dots\dots\dots$ ($\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{4}$)
- (5) The ratio between the circumference of the circle and its diameter length is $\dots\dots\dots$ ($\frac{\pi}{2}$ or π or $\frac{1}{\pi}$ or 2π)
- (6) $300 \text{ cm}^3 + 3.7 \text{ litres} = \dots\dots\dots \text{ litres}$ (6.7 or 4 or 3.6 or 303.7)
- (7) An agricultural machine ploughs 6 feddans in 3 hours , then the rate of performance of the machine is $\dots\dots\dots$ feddans/hour
(2 or 15 or 3 or 25)

- (8) $\frac{1}{6} : 3 \frac{1}{3}$ in the simplest form is
 (1 : 20 or 2 : 15 or 2 : 5 or 1 : 5)
- (9) If the volume of a cuboid = 40 cm^3 , and its height = 4 cm. , then the area of its base = (10 cm. or 10 cm^2 or 160 cm^2 or 160 cm.)
- (10) The sum of measure of two consecutive angles in a parallelogram =
 (60° or 90° or 180° or 360°)
- (11) The two diagonals are equal in length and not perpendicular in
 (rectangle or rhombus or triangle or square)
- (12) The following data are descriptive except
 (favourite colour or age or birth place or name)

2 Complete the following statements :

- (1) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = :
- (2) $\frac{3}{10} = \dots\dots\dots \%$
- (3) The ratio between 3 feddans : 40 kirats = :
- (4) If $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C = \dots\dots\dots : \dots\dots\dots$
 (in the simplest form)
- (5) 39 days \approx week. (to the nearest week)
- (6) The sum of all edges of a cube is 24 cm. , then its volume = cm^3
- (7) $\triangle \bigcirc \triangle \triangle \bigcirc \bigcirc \triangle \triangle \triangle$ (in the same pattern)
- (8) The range of the set of values 7 , 3 , 6 , 9 and 5 is

3 Answer the following questions :

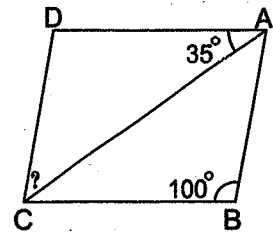
- (1) If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit
 Calculate the selling price.

- (2) If the ratio among the measures of the angles of a triangle is 2 : 3 : 4
 Find the measure of the greatest angle in this triangle.

(3) In the opposite figure :

ABCD is a parallelogram in which
 $m(\angle B) = 100^\circ$, $m(\angle DAC) = 35^\circ$

Find : $m(\angle ACD)$

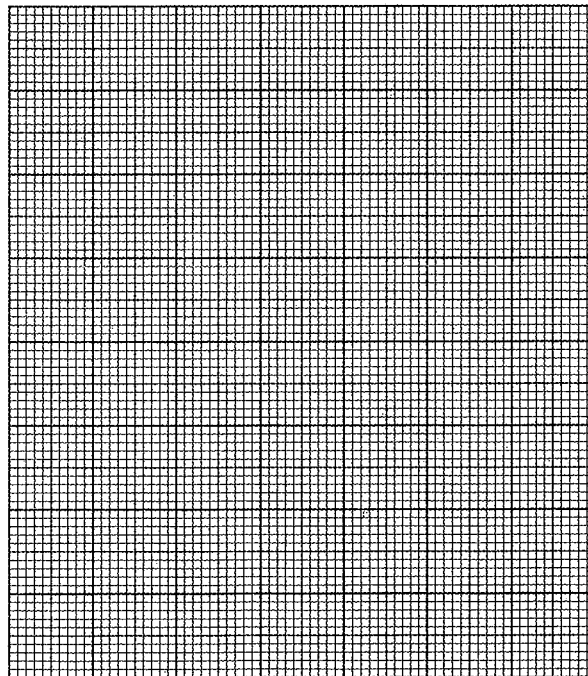


(4) A cuboid tin with inner dimensions 2 dm. , 3 dm. and 4 dm. was full of honey.
 Calculate the price of honey , given that the price of one litre is L.E. 20

(5) The following table shows the marks of 100 students in one month in math test :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.



16 Souhag Governorate

Maths Supervision

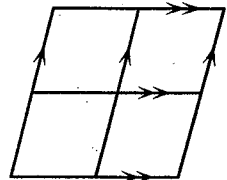
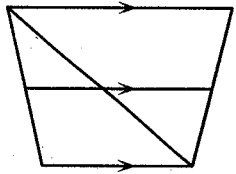


Answer the following questions :

1 Choose the correct answer :

(1) If $a : b = 2 : 3$, $b : c = 6 : 7$, then $a : c = \dots\dots\dots$

(7 : 4 or 4 : 7 or 12 : 7 or 6 : 7)

- (2) The range of the values 7 , 3 , 6 , 15 and 10 is
 (4 or 7 or 12 or 15)
- (3) If $\frac{x}{9} = \frac{4}{3}$, then $x + 2 =$
 (12 or 14 or 16 or 20)
- (4) $1 - (35 \% + 25 \%) =$
 ($\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{4}$)
- (5) The ratio between 3 feddans : 24 kirats =
 (3 : 2 or 3 : 1 or 1 : 8 or 1 : 4)
- (6) The number of parallelograms
 in the opposite figure is
 (9 or 7 or 5 or 4)
- 
- (7) If the volume of a cuboid = 300 cm^3 , its base area = 25 cm^2 , then its height
 = cm.
 (12 or 13 or 14 or 15)
- (8) $250 \text{ gm.} : \frac{1}{2} \text{ kg.} =$
 (2 : 1 or 1 : 2 or 1 : 5 or 5 : 1)
- (9) A cube of volume 125 cm^3 , then the area of its base =
 (25 cm^2 or 25 cm. or 5 cm^2 or 5 cm.)
- (10) The following data are descriptive except the
 (favourite colour or birth place or age or blood species)
- (11) In the opposite figure :
 The number of trapezoids is
 (2 or 4 or 3 or 5)
- 
- (12) $23 \text{ cm}^3 =$ litres.
 (0.23 or 2 300 or 0.023 or 230)

2 Complete each of the following :

- (1) $\frac{1}{4} : \frac{1}{3} : \frac{1}{2} =$: : (in the simplest form)
- (2) If the drawing scale > 1 , then this expresses
- (3) $\triangle \bigcirc \triangle \triangle \bigcirc \bigcirc \triangle \triangle \triangle$ (in the same pattern)
- (4) The difference between the maximum value and the minimum value is
 called
- (5) The number of edges of a cube = edges.
- (6) Area of the square = side length \times
- (7) $300 \text{ mm}^3 =$ cm^3
- (8) From the properties of the proportion , the product of the extremes
 = the product of the

3 Answer the following questions :

- (1) A metallic cube of edge length 12 cm. , it needs to be converted it into ingots in the shape of cuboid each of them of dimensiona 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

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- (2) The ratio among the lengths of the sides of a triangle is 2 : 3 : 4 and the preimeter of the triangle = 36 cm. Calculate the length of each side of the triangle.

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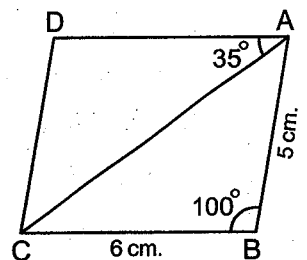
- (3) In the opposite figure :

ABCD is a parallelogram in which
 $AB = 5 \text{ cm.}$, $BC = 6 \text{ cm.}$ $m(\angle B) = 100^\circ$
 and $m(\angle DAC) = 35^\circ$, without using measuring tools , find :

[a] $m(\angle D) = \dots\dots\dots^\circ$

[b] $m(\angle ACD) = \dots\dots\dots^\circ$

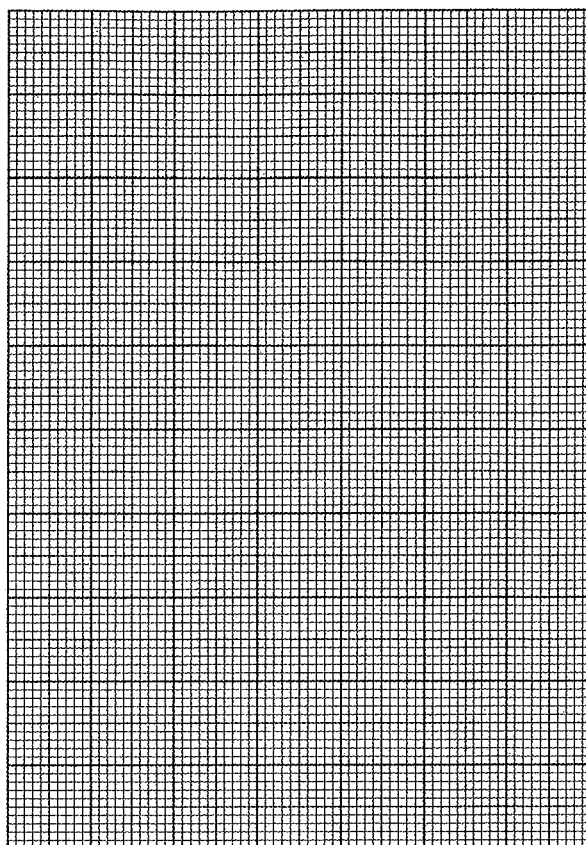
[c] The perimeter of the parallelogram ABCD = $\dots\dots\dots \text{ cm.}$



- (4) The following table shows the ages of visitors to a museum during a certain period :

Visitor's age	10 –	20 –	30 –	40 –	50 –	Total
Frequency	7	10	15	20	13	65

Draw the frequency curve for this distribution.



17 Qena Governorate

Maths Supervision



Answer the following questions :

1 Complete each of the following :

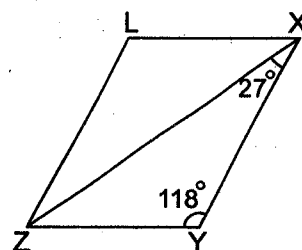
- (1) 30 days \approx weeks. (to the nearest week)
- (2) $1 \frac{3}{4} =$ %
- (3) If the volume of a cuboid is 64 cm^3 and the area of its base is 16 cm^2 , then the height = cm.
- (4) If x , 18 , 6 and 9 are proportional quantities , then $x =$
- (5) If $a : b = 2 : 3$ and $b : c = 3 : 5$, then $a : c =$
- (6) If the marks of 6 pupils in one test are 29 , 33 , 57 , 40 , 36 , 49 , then the range of these marks =
- (7) In the opposite figure :

XYZL is a parallelogram in which
 $m(\angle Y) = 118^\circ$ and $m(\angle YXZ) = 27^\circ$, then :

[a] $m(\angle L) =$ $^\circ$

[b] $m(\angle LXZ) =$ $^\circ$

- (8) The area of the triangle = $\frac{1}{2} \times$ \times



2 Choose the correct answer from those given :

- (9) The opposite data are descriptive except
 (The favorite colour **or** birthday **or** age **or** blood species)
- (10) 4.6 litres = mL. (46 **or** 460 **or** 4 600 **or** 46 000)
- (11) $\frac{2}{3} : 3 \frac{1}{3} = \dots : \dots$ (1 : 2 **or** 2 : 5 **or** 1 : 10 **or** 1 : 5)
- (12) The volume of the cuboid whose dimensions are 2 cm. , 3 cm. , 5 cm.
 = cm³ (10 **or** 25 **or** 30 **or** 50)
- (13) The centimetre cube is a unit for measuring
 (the perimeter **or** the area **or** the volume **or** the length)
- (14) If one of the angles of a parallelogram is right and two of its adjacent sides are equal in length , then it is called
 (rhombus **or** square **or** triangle **or** rectangle)
- (15) The drawing scale = $\frac{\dots}{\dots}$
 ($\frac{\text{length in reality}}{\text{length in drawing}}$ **or** $\frac{1}{\text{length in reality}}$ **or** $\frac{\text{length in drawing}}{\text{length in reality}}$ **or** $\frac{1}{2}$)
- (16) A tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans = hours. (4 **or** 6 **or** 7 **or** 8)
- (17) $\frac{3}{4} = \dots$ (as a decimal fraction) (0.2 **or** 0.5 **or** 0.25 **or** 0.75)
- (18) 45 % = (as a fraction in the simplest form)
 ($\frac{45}{1\,000}$ **or** $\frac{9}{20}$ **or** $\frac{4}{10}$ **or** $\frac{5}{100}$)
- (19) The ratio between 12 kirats and 2 feddans = :
 (1 : 4 **or** 4 : 1 **or** 1 : 6 **or** 6 : 1)
- (20) If a man distributed L.E. 200 among his three sons in the ratio 2 : 3 : 5 , then the share of the third = L.E.
 (50 **or** 100 **or** 150 **or** 75)

3 Answer the following :

- (21) A cube of metal its edge length is 12 cm. If it is wanted to be melted down and converted into alloys in the form of a cuboid with dimensions 3 cm. , 4 cm. , and 6 cm. Calculate the number of alloys that can be obtained.

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(22) Ahmed draw a picture of his brother Osama with a drawing scale 1 : 40

If the real height of Osama is 160 cm. What is height in the picture ?

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(23) A triangular garden in a school , the ratio between its side lengths is 3 : 4 : 5

, if the perimeter of the garden is 120 metres , calculate the length of each of the sides of the garden.

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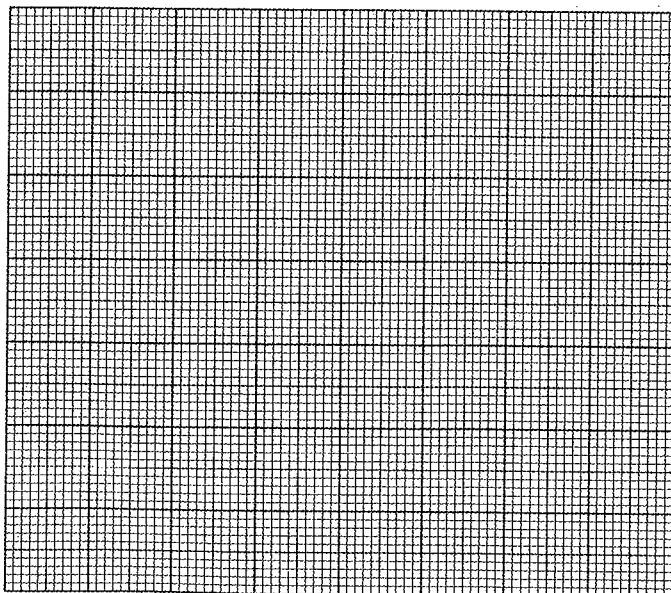
(24) The following table shows the extra money which 100 workers got in a month in a factory :

The extra money	20 –	30 –	40 –	50 –	60 –	70 –	Total
Number of workers	20	15	30	20	10	5	100

[a] Draw the frequency curve of this distribution.

[b] What is the number of workers who obtained extra money less than 50 pounds ?

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18 Luxor Governorate

Luxor Educational Directorate
Maths Department



Answer the following questions :

1 Choose the correct answer :

- (1) Parallelogram is a rectangle if one of its angles is
(right **or** acute **or** obtuse **or** straight)
- (2) The ratio between the side length of the square to its perimeter
is : (1:5 **or** 1:3 **or** 1:4 **or** 4:1)
- (3) A car covers 240 km. in 3 hours , then the car speed is km./hour
(60 **or** 80 **or** 120 **or** 90)
- (4) The simplest form of the ratio 2.4 : 18 = :
(2:15 **or** 1:6 **or** 6:7 **or** 5:3)
- (5) In the proportion 6 , 8 , 3 , x , the value of x is
(5 **or** 7 **or** 4 **or** 3)
- (6) All of the following are considered descriptive data except
(name **or** age **or** address **or** hobbies)
- (7) $16\,000\text{ cm}^3 = \dots\dots\dots$ litres. (1.6 **or** 16 **or** 160 **or** 0.16)
- (8) $\frac{2}{5} = \dots\dots\dots\%$ (20 **or** 40 **or** 60 **or** 10)
- (9) If $a : b = 2 : 3$ and $b : c = 5 : 6$, then $a : c = \dots\dots\dots$
(5:9 **or** 9:7 **or** 5:8 **or** 15:11)
- (10) The sum of all edge lengths of a cube is 84 cm.
 , then its volume is cm^3 (49 **or** 343 **or** 28 **or** 14)
- (11) 15 % of 400 = (40 **or** 70 **or** 80 **or** 60)
- (12) 2 kg. : 3 500 gm. = : (2:3 **or** 7:6 **or** 4:7 **or** 5:4)

2 Complete the following :

- (1) The range of the set of values 7 , 3 , 8 , 9 and 5 is
- (2) Diagonals are equal in length in each of and
- (3) If the drawing length is 3 cm. and the real length is 18 m. , then the drawing
scale is :
- (4) The volume of a cuboid is 720 cm^3 , and its height is 9 cm. , then its base
area is cm^2
- (5) If the buying price of some goods is L.E. 2 000 and it sold for L.E. 1 800 ,
then the percentage of loss is %

(6) If $\frac{2}{5} = \frac{8}{x}$, then $x = \dots\dots\dots$

(7) $1 - 70\% = \dots\dots\dots\%$

(8) The simplest form of the ratio $12 : 18 : 36 = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$

3 Answer the following :

(1) The ratio between Mina's age and Ahmed's age is $7 : 11$, and the difference between their ages is 8 years, find the age of each of them.

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(2) A picture of a tree is drawn with a drawing scale $1 : 100$, if the real height of the tree is 8 m., find its length in the picture.

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(3) A swimming pool is in the shape of cuboid whose internal dimensions are 40 m., 30 m. and 1.8 m., find its capacity in litre.

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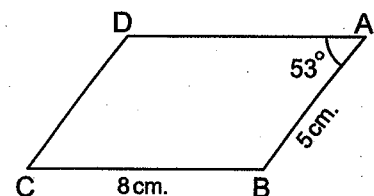
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(4) In the opposite figure :

ABCD is a parallelogram in which $AB = 5$ cm.,
 $BC = 8$ cm. and $(\angle A) = 53^\circ$ Find :

[a] $m(\angle B)$

[b] The length of \overline{AD} and the length of \overline{DC}



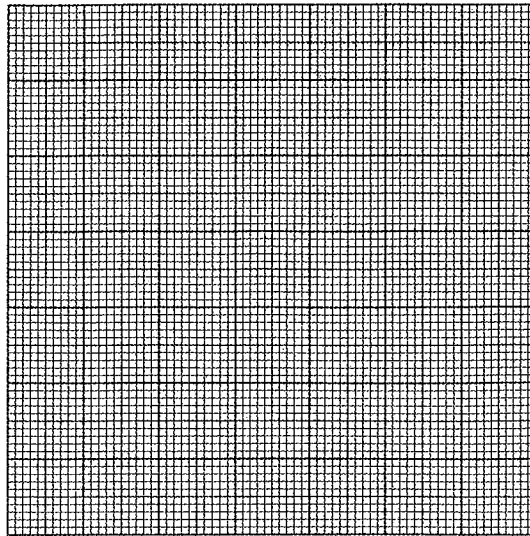
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(5) The following table shows the ages of visitors to an exhibition within an hour of a day :

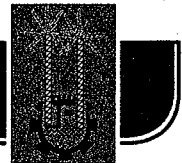
Visitor's age	10 –	20 –	30 –	40 –	50 –	Total
Number of visitors	6	9	12	10	8	45

Draw the frequency curve for this distribution.



19 Aswan Governorate

Aswan Educational Directorate
Eng. M.M. Yacoub Formal Language School



Answer the following questions :

1 Choose the correct answer of the following :

- (1) The following data are quantitative except
(age *or* weight *or* name)
- (2) If the sum of the edge lengths of a cube is 36 cm. , then its volume
= cm³ (3 *or* 27 *or* 12)
- (3) If $a : b = 2 : 3$, $b : c = 6 : 7$, then $a : c =$
(7 : 4 *or* 12 : 7 *or* 4 : 7)
- (4) $12 \text{ dm}^3 =$ cm³ (1 200 *or* 12 000 *or* 120)
- (5) $\frac{2}{3} : 3 \frac{1}{3} =$: (1 : 5 *or* 2 : 3 *or* 2 : 5)
- (6) If one angle of a parallelogram is right , then it called a
(rectangle *or* square *or* rhombus)
- (7) $1 \frac{3}{4} =$ % (75 *or* 175 *or* 25)
- (8) An agricultural tractor ploughs 28 feddans in 4 hours , the time that needed
to plough 42 feddans is hours. (4 *or* 12 *or* 6)
- (9) If $\frac{x}{18} = \frac{4}{6}$, then $x + 1 =$ (13 *or* 11 *or* 12)
- (10) If length of an insect in a picture is 40 cm. , and the real length is 2 mm.
, then the drawing scale is (200 : 1 *or* 20 : 1 *or* 1 : 200)
- (11) If a car covered 280 km. in 4 hours , then the rate of covered distance per
hour = km./hr. (7 *or* 70 *or* 700)
- (12) Two wires , the ratio between their lengths is 3 : 4 and their sum is 140 cm.
, then the length of the second wire is cm. (30 *or* 40 *or* 80)

2 Complete each of the following :

(1) The following figure in this pattern    is

(2) Drawing scale = $\frac{\text{.....}}{\text{.....}}$

(3) If the volume of a cuboid is 560 cm^3 and its height is 8 cm. , then its base area is cm^2

(4) If the marks of 5 pupils in a test are 36 , 40 , 57 , 29 and 33 , then the range of marks is

(5) $1 - (25 \% + 30 \%) = \text{.....} \%$

(6) 80 minutes : 2 hours = : (in the simplest form)

(7) A map is drawn with a scale 1 : 200 000 , if the distance between two cities is 8 km. in reality , then the length between them on that map is

(8) The ratio between length of side of an equilateral triangle and its perimeter = :

3 Answer the following :

(1) Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 , at the end of the year the profit was L.E. 3 900 Calculate the share of each of them from profit.

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(2) A container has 16 litres of oil , it is wanted to put them in small bottles , the capacity of each of them is 400 cm^3 . Calculate the number of bottles.

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(3) If buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.

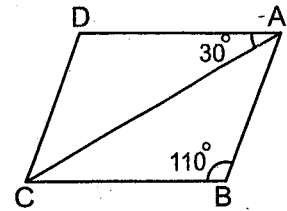
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(4) In the opposite figure :

ABCD is a parallelogram , then find :

[a] $m(\angle D) = \dots\dots\dots^\circ$

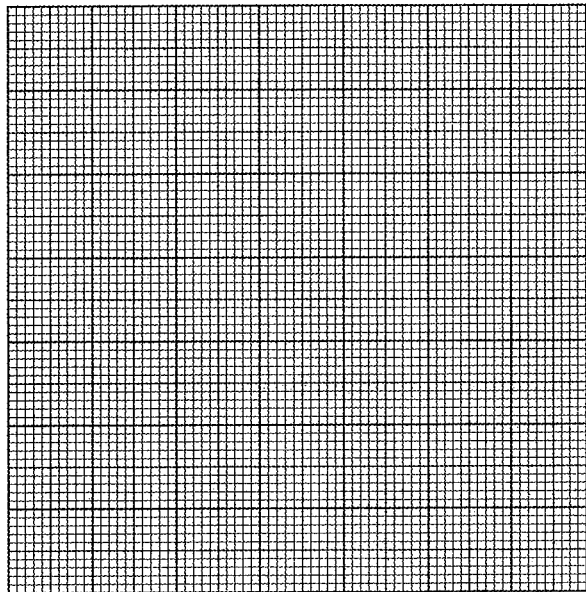
[b] $m(\angle ACD) = \dots\dots\dots^\circ$



(5) The following table shows the number of hours which spent by 40 pupils to study their lessons daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	3	8	12	11	40

Represent these data using the frequency curve.



20 South Sinai Governorate

El-Tur Educational Zone
Maths Inspection



Answer the following questions :

1 Choose the correct answer :

(1) If 2 , 5 , x and 15 are proportional , then $x = \dots\dots\dots$

(2 or 5 or 6 or 15)

(2) The percentage is a ratio its second term is

(10 or 100 or 1 000 or 10 000)

(3) 3 litres = cm^3

(3 or 30 or 300 or 3 000)

(4) If the ratio between a child's age to his father's age is 2 : 13 and the child's age is 6 years , then father's age = years.

(6 or 15 or 39 or 41)

- (5) The ratio between the two numbers 1.6 and 1.8 = :
(1 : 4 or 8 : 9 or 3 : 8 or 1 : 16)
- (6) The number of edges of the cube the number of faces of the cuboid.
(> or < or = or ≤)
- (7) A merchant bought a TV set for L.E. 1 800 and he sold it for L.E. 2 000 ,
then his profit = L.E. (1 800 or 800 or 200 or 3 800)
- (8) The range of the set of values 7 , 3 , 6 , 9 and 5 is
(4 or 2 or 6 or 12)
- (9) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale = : (1 : 10 or 1 : 100 or 1 : 1 000 or 1 : 6)
- (10) Antecedent of the ratio 3 : 11 is (3 or 5 or 11 or 2)
- (11) An agricultural tractor ploughs 28 feddans in 4 hours , then its rate of performance = feddans / hour (4 or 6 or 7 or 8)
- (12) If one of the angles of a parallelogram is right angle , then it is called
(a square or a rectangle or a rhombus or a triangle)

2 Complete :

- (1) $\frac{3}{4} = \dots\dots\dots \%$
- (2) The ratio between the side length of the square and its perimeter = :
- (3) If the volume of a cuboid is 64 cm^3 and the area of its base is 16 cm^2 , then its height = cm.
- (4) 250 grams : $\frac{1}{2}$ kilogram = : (in the simplest form)
- (5) If the drawing scale < 1 , this expresses
- (6) If $a : b = 2 : 3$, $b : c = 3 : 5$, then $a : c = \dots\dots\dots : \dots\dots\dots$
- (7) $4 \text{ m}^3 = \dots\dots\dots \text{ dm}^3$
- (8) The data : the age , the length , the weight and the favorite color are quantitative data except

3 Answer the following :

- (1) Nahed bought an automatic washing for L.E. 3 600 and the discount was 10 % Calculate the original price of the washing machine before discount.

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- (2) The ratio among the measures of the angles of a triangle is 2 : 3 : 4
Find the measure of each angle in the triangle.

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- (3) A vessel in the shape of a cube with edge length 15 cm. is filled with honey.
Calculate the capacity of the vessel of the honey.

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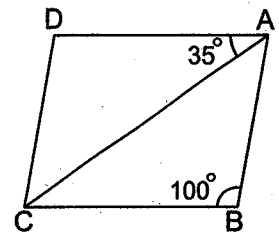
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- (4) In the opposite figure :

ABCD is a parallelogram , find :

[a] $m(\angle BAC) = \dots\dots\dots^\circ$

[b] $m(\angle D) = \dots\dots\dots^\circ$



- (5) The following table shows the marks of 100 students in one maths test :

Marks	10 –	20 –	30 –	40 –	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.

