**Cairo governorate**

**Nasr city educational zone**

**Alsun modern school**



**For Primary Six**

**Name: ……………………..**

**Class: ……………………...**

**Q1: Choose the correct answer from those given:**

|  |
| --- |
| 1. The volume of a cuboid with a squared base of side length 6cm. and its height is 10 cm. equals …………….cm3.
 |
| (a) | 60 |  | (b) | 12 |  | (c) | 360 |  | (D) | 600 |  |
| 1. The ratio between the perimeter of the equilateral triangle and its side length equals …….
 |
| (a) | 1:3 |  | (b) | 2:3 |  | (c) | 3:1 |  | (D) | 3:2 |  |
| 1. If the ratio among the measurements of the angles of a triangle is 1:2:3,then the measure for the smallest angle = ……
 |
| (a) | 10 |  | (b) | 45 |  | (c) | 60 |  | (D) | 30 |  |
| 1. If the sum of the edge lengths of a cube = 144 cm, then its volume equals = ……
 |
| (a) | 1728cm |  | (b) | 144cm |  | (c) | 144cm2 |  | (D) | 1728cm3 |  |
| 1. If the volume of a cube = 0.125 cm3, then its edge length = ……cm
 |
| (a) | 25 |  | (b) | 2.5 |  | (c) | 5 |  | (D) | 0.5 |  |
| 1. If 45% of $X$ = 90, then $X$ = ……………….
 |
| (a) | 200 |  | (b) | 100 |  | (c) | 300 |  | (D) | 20 |  |
| 1. The diagonals are perpendicular and not equal in length in ……….
 |
| (a) | Parallelogram |  | (b) | Rectangle |  | (c) | Rhombus |  | (D) | Square |  |
| 1. The volume of a cube of edge length 0.1 dm. = ……….. cm3.
 |
| (a) | 0.001 |  | (b) | 1000 |  | (c) | 1 |  | (D) | 10 |  |
| 1. If a:b = 50%, b:c = 2:3, then a:c = …………
 |
| (a) | 1:2 |  | (b) | 2:3 |  | (c) | 1:3 |  | (D) | 3:1 |  |
| 1. The centimeter cube is a unit for measuring …………
 |
| (a) | length |  | (b) | volume |  | (c) | perimeter |  |  |  |
| 1. 125 piastres: 5 pounds = …………….. : …………….
 |
| (a) | 4:1 |  | (b) | 1:4 |  | (c) | 25:1 |  | (D) | 1:25 |  |
| 1. If the volume of a cuboid is 24cm3. and the area of its base is 8cm2, then its height = …………... cm
 |
| (a) | 3 |  | (b) | 6 |  | (c) | 192 |  | (D) | 0.3 |  |
| 1. 4.63 litres = …………….. cm3.
 |
| (a) | 463 |  | (b) | 4630 |  | (c) | 46300 |  | (D) | 46.3 |  |
| 1. The range of the set of values: 7, 3, 6, 9 and 5 is ……………
 |
| (a) | 3 |  | (b) | 4 |  | (c) | 6 |  | (D) | 12 |  |
| 1. The percentage is a ratio which second term is ……………
 |
| (a) | 10 |  | (b) | 100 |  | (c) | 1000 |  | (D) | 10000 |  |
| 1. An agricultural machine ploughs 14 feddans in 3.5 hours, then the rate of performance of the machine in feddan per hour is ………….
 |
| (a) | $$\frac{1}{2}$$ |  | (b) | 8 |  | (c) | 4 |  | (D) | 49 |  |
| 1. 7.5 m3. = ………………. dm3.
 |
| (a) | 750 |  | (b) | 75 |  | (c) | 750000 |  | (D) | 7500 |  |
| 1. If an angle of a parallelogram was a right angle and its two adjacent sides were equal in length, then it's called……..
 |
| (a) | rhombus |  | (b) | square |  | (c) | triangle |  | (D) | rectangle |  |
| 1. If $\frac{x}{9}$= 5% , then$ x$ = …………….
 |
| (a) | 0.45 |  | (b) | 4.5 |  | (c) | 45 |  | (D) | 450 |  |
| 1. The base perimeter of a cube is 36cm., then its volume = ….. cm3.
 |
| (a) | 27 |  | (b) | 216 |  | (c) | 729 |  | (D) | 9 |  |
| 1. ……………. Is quantitative data.
 |
| (a) | Blood type |  | (b) | Address |  | (c) | Date of birth |  |
| 1. The volume of the cube is 125 cm3., then its base area = …………
 |
| (a) | 25cm2.  |  | (b) | 25 cm |  | (c) | 2cm2.  |  | (D) | 2 cm |  |
| 1. If the range of the marks distribution of mathematics equals 40 and the length of a set equals 5, then the number of sets equals = …………
 |
| (a) | 35 |  | (b) | 45 |  | (c) | 8 |  | (D) | 200 |  |
| 1. 300 gm. : $1\frac{1}{2}$ kg. = …………
 |
| (a) | 1:2 |  | (b) | 1:5 |  | (c) | 1:10 |  | (D) | 1:30 |  |
| 1. 12 dm3. = …………….. cm3.
 |
| (a) | 120 |  | (b) | 1200 |  | (c) | 12000 |  | (D) | 120000 |  |

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**Q2: Complete the following:**

1. $\frac{x+1 }{2}$ = $\frac{5 }{2}$ then x = …………………..
2. The range of these set of values: 29, 35, 45 and 49 equals ……..
3. If 3, 4, 9 and $X$ are proportional quantities, then $X$=……..
4. 3000 gm : 5 kg = ……. : ……… (in the simplest form)
5. If the drawing scale >1, this express ………
6. The two diagonals are perpendicular in each of …… and …………..
7. The number of the quadrilaterals in which the two diagonals bisect each other is ………………..
8. 20% of 200 pounds = …………. Pounds.
9. 1500 cm3 = …………….. litre.
10. 76% + 41% - …………….. = 100%
11. 4m3. = ………….. litre
12. If 78 is the maximum value in a set and the range equals 39, then the minimum value in this set is ………………
13. A cuboid, its volume 400 cm3. Its length is 8 cm. and its width is 5cm, then its height = …………. Cm.
14. The two diagonals are equal in length and perpendicular in …………
15. If a:b = 2:3, b:c=3:5, then a:c = …… : ……..
16. If 28 is the greatest individual of a set and the range = 15, then the smallest individual of this set = ……………….
17. The ratio between 12 kirats and 2 feddans = …… : ……..
18. The capacity is ………………….
19. 0.75 litre = ………. dm3.
20. The range for the values: 12, 7, 19, 17, 21 is ………
21. 62.5% = $\frac{………}{8}$
22. The volume of the cube which the sum of all its edge lengths is 36cm. = ………. cm3.
23. If the drawing scale <1, this expresses ………….
24. If one of the angles of a parallelogram is right, then it will be called …………………………..
25. The difference between the greatest individual and smallest individual of a set of values is called ……………….
26. The form of the equal ratios: $\frac{2}{3}=\frac{4}{6}=\frac{8}{12}$ is called ……………
27. If the volume of a cuboid is 64cm3. and the area of its base is 16cm2., then its height = ………… cm.
28. The cuboid with equal dimensions is called……………………
29. The area of the base of a cuboid is 6 cm2. and its height is 7 cm., then its volume = …………… cm3.
30. The parallelogram become a rectangle if one of its angles was………
31. The range = ………………… - ……………………
32. From the properties of the proportion , then the product of the extremes = the product of the …………………….
33. The volume of a cuboid whose dimensions are 3cm., 2cm. and 5 cm. equals ………….. cm3.
34. 18 hours: one day = ……….. : …………… ( in the simplest form)
35. The ratio among $\frac{1}{3} : \frac{1}{4}: \frac{1}{3} =$ ……….. : ……………
36. If A:b = 2: 3 and B : C = 3 : 5, then A : C = ……….. : ………

( in the simplest form)

1. The edge length of a cub is 0.6 dm., then its volume is ……… cm3.
2. The ratio between the side length of an equilateral triangle and its perimeter = ………… : ………………
3. The percentage is a ratio ……………..
4. If a length in drawing is 2 cm. and its real length is 20m., then the drawing scale equals …….. : ……………
5. The four sides are equal in length in each of ……….. and …………….
6. The edge length of a cube = 9cm., then the sum of all its edge lengths = ……………..
7. The length of an insect in a picture is 4cm. and its real length is 2 millimeters, then the drawing scale is ……………………….
8. The kinds of statistical data are : descriptive data and ………… data
9. If the values of a frequency distribution lie between (10,90), then the range of this distribution = ………………………

A

B

C

D

1. In the opposite figure: ABCD is a parallelogram in which $m\left(∠A\right)=60°, then m\left(∠C\right)=$……..

**Q3:**

1. which is greater in volume, a cuboid of dimensions 70cm., 50 cm and 30 cm. or a cuboid whose base area = 2925cm2 and its height = 35cm?

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1. A father distributed L.E. 6300 among his three sons, if the share of the first was third of the money and the ratio between the share of the second and the third is equal 3:2, Calculate the share of each of them.

**------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. If the length of the Suez Canal on a map of drawing scale 1:1100000 is 15 cm. Find the real length in kilometers.

**------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. If the height of a building in a picture is 3 cm. and its real height is 21m. Calculate the drawing scale of this picture.

**------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. A man bought a flat for L.E. 15000, he sold it at 10% profit. Calculate the selling price of the flat.

**------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. A car consumes 20 litres of benzene to cover a distance of 180km. How many litres is needed to cover a distance of 540km?

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7) The sum of areas of all faces of a cube is 54 cm2

 Calculate its volume ?

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8)A man died and left a capital of L.E. 48000 to be divided among his wife , 2 boys and 2 girls . the wife should take $\frac{1}{8}$ of the capital and each boy should take twice as much as each girl .

Calculate the share of the wife and each of boy and girl?

**------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. Three persons set up a company, at the end of the year the profit has been divided, the share of the first = $\frac{5}{3}$ the share of the second, the share of the second = $\frac{4}{3}$ the share of the third, if the share of the first is more than the share of the third by 8250 pound. What is the share of each of them?

**------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. A cuboid, the perimeter of its base equals 36cm. and the ratio between the length and the width of its base equals 5:4. Calculate its volume if the height of it equals 12cm.

**------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. If the ratio between the measures of the angles of a triangle is 5:6:7 and the measure of the first angle is 50o. Find the measure of each of the other two angles.

**------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. drawing scale of a map is 1:9 000 000 How long is
2. The sum of all dimensions of a cuboid is 48cm. and the ratio among the lengths of its dimensions is 5:4:3 Find the volume.

**---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. The ratio between the lengths of the sides of a triangle is 2:3:4, if the perimeter of the triangle is 54cm. Find the length of each side of the triangle.

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1. A shopkeeper for electric sets sold a refrigerator for L.E. 3180, If the percentage of his profit is 6% Find buying price.

**---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. A container in the shape of a cube, the length of its interior edge equals 20cm. Calculate the capacity of the container in litres.

**---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. A quantity of honey is needed to be distributed into small 12 bottles; the capacity of each of them is 400 cm3. Find the volume of quantity of honey.

**---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. A container has 12 litres of honey, it is wanted to put them in small bottles, the capacity of each of them is 400 cm3. Calculate the number of bottles which are needed for that.

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1. A man sold his car after one year of using it with price L.E. 52000, if its buying price was L.E. 65000. Find the percentage of his loss.

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**Geometry**

1. In the opposite figure: ABCD is a parallelogram in which $m\left(∠C\right)=60°, then m\left(∠BDC\right)=80°$

A

B

C

D

**Find: 1)** $m\left(∠C\right)$ **2)** $m\left(∠ADB\right)$

1. In the opposite figure: ABCD is a parallelogram in which $m\left(∠CAD\right)=35°, then m\left(∠B\right)=100°$

A

B

C

D

$$, AB=3cm and BC=5cm$$

Calculate without using measuring tools each of:

1. $m\left(∠BAC\right)$ and $m\left(∠ADB\right)$
2. The length of each$\overbar{BC} and \overbar{AD}$
3. In the opposite figure: ABCD is a parallelogram in which $m\left(∠C\right)=60°, and m\left(∠BDC\right)=70°$

A

B

C

D

Find:

1. Measure of $\left(∠A\right)$ in degrees.
2. Measure of $\left(∠ADB\right)$ in degrees

In the opposite figure: ABCD is a trapezium in which

$$m\left(∠B\right)=90°, AD=7cm, AB=4cm, BC=10cm, DC= 5cm $$

and the figure ABXD is a rectangle, in this case complete:-

A

B

X

C

D

1. AB= …………. = ……………… cm
2. AD= …………. = ……………… cm
3. The perimeter of $∆ DXC$ = ……………… cm
4. In the opposite figure: ABCD is a parallelogram whose diagonals are intersecting at M, if $m\left(∠BAD\right)=65°, m\left(∠DBC\right)=40°$

AB=3cm, and AM=5cm

A

B

C

D

M

Find:

1. $m\left(∠ABC\right)$
2. $m\left(∠ABD\right)$
3. The length of $\overbar{DC}$
4. The length of $\overbar{AC}$
5. In the opposite figure: ABCD is a rhombus in which $m\left(∠BCD\right)=70°, and the length of \overbar{AB}=8 cm$

A

B

C

D

Find:

1. $the perimeter of the figure ABCD$
2. $m\left(∠ABC\right)$

**The following table shows the number of hours spent by a number of pupils dealing with computer:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Number of hours | 1- | 2- | 3- | 4- | 5- | 6- | Total |
| Number of pupils | 8 | 11 | 15 | 6 | 4 | 2 | 46 |

1. Represent these data using the frequency curve.
2. What is the number of pupils who spend less than 4 hours in dealing with computer?

**The table below represents the age of 45 visitors:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Age  | 10- | 20- | 30- | 40- | 50- | Total |
| Frequency  | 6 | 9 | 14 | 11 | 5 | 45 |

1. Represent these data by the frequency curve.
2. Find the number of visitors whose ages less than 30 years.

**The following table shows the marks of 100 students in one month in math:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Number of hours | 20- | 30- | 40- | 50- | Total |
| Number of pupils | 15 | 30 | 40 | 15 | 100 |

**Draw the frequency curve for this distribution.**