Q.1 Multiple choice questions. [___/10]

i. 5% increase in the $100 means
   A. $5
   B. $95
   C. $100
   D. $105

ii. 20% of 2000 is
    A. 100
    B. 400
    C. 2400
    D. 1600

iii. 4 hours : 100 minutes expressed in the simplest form is
     A. 5 : 12
     B. 2 : 50
     C. 12 : 5
     D. 4 : 100

iv. In inverse proportion, when one quantity increases the other quantity
    A. Increases
    B. Decreases
    C. Remains same
    D. None of the above

v. 20 litres decreased by 45% is
    A. 11 litres
    B. 9 litres
    C. 14 litres
    D. 29 litres
vi. 23 12 converted to 12-hour clock notation is
A. 23:12 pm
B. 11:12 am
C. 11:23 am
D. 11:12 pm

vii. The sum of two supplementary angles is
A. 180°
B. 270°
C. 90°
D. 360°

viii. The gradient of the line \( y = 5x + 4 \) is
A. 5x
B. 5
C. 4y
D. 4

ix. The sum of exterior angle of an n sided polygon is equal to
A. 180°
B. 270°
C. 300°
D. 360°

x. Rectangle has ______ lines of symmetry
A. 0
B. 1
C. 2
D. 4
Q.2

a. Fill in the blanks.
   i. The most frequent number of a set of data is called its ____________.
   ii. If the base angles of an isosceles triangle are 25° then the third angle ________.
   iii. Vertically opposite angles are always ________________.
   iv. The sum of interior angles of a pentagon is ________________.
   v. 5430 Litres equal to ________________ cm³.

b. True or False
   i. Each angle of an equilateral triangle is equal to 45°. ________
   ii. The gradient of a straight line measures the ratio of vertical change to the horizontal change. ________
   iii. Parallel lines are formed when two straight lines intersect each other. ________
   iv. Midnight converted to 24 hour notation is 12 00. ________
   v. Angle bisector means dividing the angle into three equal parts. ________

Q.3

a. There are 28 bed sheets and 24 pillow covers in the cupboard. Find
   i. the ratio of bed sheets to pillow covers in the simplest form. ________
   ii. the ratio of pillow covers to the total items in the cupboard. ________
b. If 5 workers can paint a building in 20 days.
   How many days will 4 workers take to paint the same building? [__/2]

c. Find the cost of 8 books when 6 books cost $48. [__/2]

d. My car travels 128 km on 12 litres of petrol.
   How far do I expect to travel on a full tank of 30 litres? [__/3]
Q.4

a. Construct:
   i. Angle bisector of \( \overline{QRS} \)

   \[ \text{Diagram of } \triangle QRS \]

   ii. Perpendicular bisector of the line \( \overline{LM} \) measuring 7 cm.

b. State the order of rotational symmetry of the following shapes.

   \[ \text{Images of shapes: L, T, X, Y, smiley face} \]
Q.5  

a. Write an expression to represent "five less than the product of eight and a number"?  

b. Given that the value of $p = -4, q = 3$  
Find the value of $S$ in the equation $S = -4p + 2q$  

c. When a number is doubled and 5 is subtracted from the result, the answer is 37.  
Find the number.  

d. The sum of three consecutive numbers is 156. Find the three numbers.
Q. 6.

a. A lorry arrived in town B at 17:45 after travelling for 8 hours and 50 minutes.
   Find the time the lorry started the journey.

b. The weight of a baby was 14kgs.
   After some time the weight of the baby was increased by 30%.
   Find the new weight.

c. After 6% deduction in bill, $282 still remains to be paid.
   Find the original bill.
Q.7

a. The goals of Team A during a football tournament are given below.
   6, 3, 4, 4, 5, 2, 1, 0, 6, 8, 4, 5

   Calculate
   
   i. The mean number of goals [__/2]

   ii. The median of the goals [__/1]

   iii. The mode of the goals [__/1]

b. Some children were asked to name their favourite flavour of ice cream.
   The pie chart shows some information about their answers.
   15 students chose mint to be their favourite flavour.

   Calculate
   
   i. The angle of sector representing strawberry. [__/2]

   ii. The total number of students who participated in the survey. [__/2]

   iii. What percentage of students selected Chocolate? [__/2]
Q.8  

a. Calculate the exterior angle of a hexagon.

b. In the diagram AB is parallel to CD.
   i. Calculate the size of the angle marked x.
   
   _______________________________________________________________________
   Give a reason for your answer
   _______________________________________________________________________

   ii. Write down the value of y. ____________________
   
   Give a reason for your answer: ____________________________

c. Find the value of the unknown variables in figure 1. Also give a reason for your answer.

   i. p?
      
      p° = ________________
      
      Reason: ____________________________

   ii. r?
      
      r° = ________________
      
      Reason: ____________________________
a. An open rectangular tank of length 12 cm, width 8 cm and height 16 cm contains water up to a height of 12 cm. Calculate:
   The volume of water in litres;

b. Given that the surface area of a cube is 96 cm\(^2\). Find
   i. The length of each side of the cube
   ii. If the length of the side of a similar cube is 10 cm, calculate its volume.
Q.10

a. Draw the graph of the following linear function

\[ y = -2x + 6 \]

b. Find the value of \( x \) and \( y \) in the given isosceles triangle.

\[ x = \quad \]

\[ y = \quad \]

c. Calculate the sum of interior angles of a 7 sided polygon.