

Maharashtra State Board

Class VI Mathematics

Sample Paper 3

Time: 2 hr 30 min

Total Marks: 60

Note:

1. All questions are compulsory.
2. Use of calculator is not allowed.

Q1. Solve the following:

[12 × 1 = 12]

1. Write the proper sign, < or >, in the empty blank.
-8 -5

2. $9 = 11 - 2$

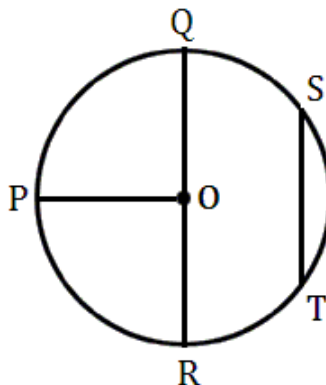
$\therefore 9 + 5 = (11 - 2) + 5$

Write which property of an equality has been used in the above example.

3. The sides of $\triangle DEF$ are 5.3 cm, 4.2 cm and 6.6 cm in length.
Write the type of the $\triangle DEF$.

4. Convert 0.400 into percentage.

5. Name the chords of the circle given below.



6. Write the opposite of +27.

7. Complete the following:

The sum of the lengths of any two sides of a triangle is _____ than the length of the third side.

8. What is the sum of $10x$, $5x$ and $-7x$?
9. Find the area of a bed sheet 2.5 m long and 2 m wide.
10. Forty cubes just fit into a cuboidal box. Each side of the cube is 1 cm. Hence, the volume of the box is _____.
11. What is the sum of $4m^2n$ and $7nm^2$?
12. Manoharpant borrowed Rs. 6,00,000 from a national bank to buy a house. After five years, he paid back his entire debt by returning an amount of Rs. 8,40,000 to the bank.
Say what is the Principal, the interest and the period in the above statement.

Q2. Solve the following:

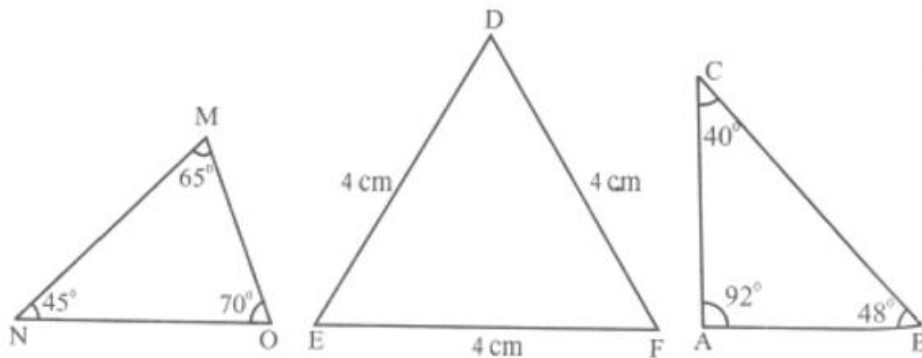
[8 × 2 = 16]

1. Aarti wanted to crop her photo. So, she reduced the dimensions of the photo by half. The original measures of the photo were 16 cm in length and 12 cm in breadth. Find the area of the cropped photo.
2. A student passes an exam if he scores 40% of the maximum marks. What is the passing marks in an exam whose maximum marks are 600?
3. Taking $x = 3$, find the value of the following algebraic expression:
 $5x^2 + x$
4. The volume of a box is 24000 cm^3 . Its length and breadth are 40 cm and 30 cm respectively. What is its height?
5. Verify whether 7 is a solution to the equation given below.
 $5 = \frac{35}{x}$
6. $\angle TRM$ is an exterior angle of $\triangle NTR$. $m\angle N = 30^\circ$, $m\angle T = 80^\circ$. Find the measure of $\angle TRM$.
7. In a certain housing colony, a tank 2.5 m long, 2 m broad and 3 m high was made for collecting rainwater. How much water will it hold?
8. Calculate the diameter of the circles for the following:
 - (i) Radius = 9 cm
 - (ii) Radius = 3.6 cm

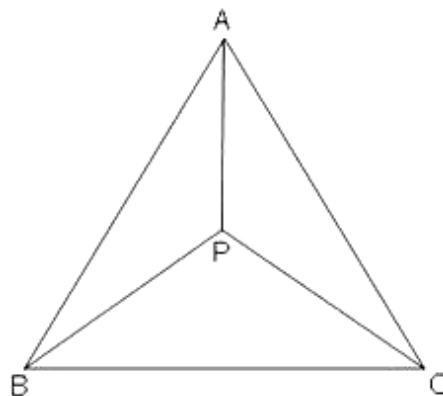
Q3. Solve the following [Any five]:

[5 × 3 =15]

1. The interest for 2 years on Rs. 18000 at a certain rate is Rs. 3240. What will be the interest for the same time at the same rate on a principal of Rs. 6000?
2. Draw a circle of radius 3 cm.
Also show one radius, one chord and one diameter in the circle.
3. A rectangle of length and breadth 4 m and 3 m respectively is dug on a piece of square land having side 5 m. Find the area of the remaining part of the land.
4. From the figures given below, state with reason the type of each triangle.



5. Add $3mn + 6n - 5m$ and $- 2m - 8mn + 7n$ in both horizontal and vertical arrangement.
6. Complete the following statements with reference to the figure.



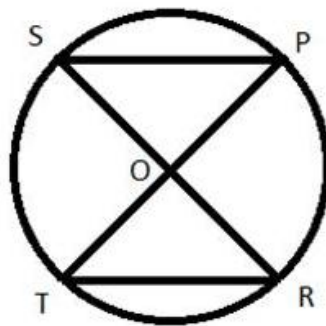
- (i) $I(AP) + I(BP) > \underline{\hspace{2cm}}$
 - (ii) $I(AP) + I(CP) \underline{\hspace{1cm}} I(AC)$
 - (iii) $\underline{\hspace{2cm}} + I(CP) > I(BC)$
7. Draw a line XY. Take any point R outside this line. Draw a line ST through point R parallel to line XY.

Q4. Solve the following [Any three]:**[3 × 4 = 12]**

1. The runs scored in some overs of a cricket match are shown in the table below. Draw a corresponding bar graph.

Over	Score (runs)
1st	6
2nd	8
3rd	7
4th	4

2. Look at the circle given below and answer the following questions:



- Name any three arcs of the given circle.
 - Name the radii shown in the given circle.
 - Name the chords which divide the circle into two halves.
 - Name four chords of the given circle.
3. Simplify: $[(15) \times (2) + (-4) \times (5)] \div (-5)$
4. What will be the interest for 4 years on Rs. 15,000 principal at the rate of 8 p.c.p.a?
5. Draw segments ST and PQ of unequal lengths. Draw a segment MN equal in length to the difference of their lengths.

Q5. Solve the following [Any one]:**[1 × 5 = 5]**

1. Namdev sowed jowar in 19,500 sq. m of his total land of 3 hectares. In what percentage of his land did he sow jowar? (1 hectare = 10,000 sq. m)
2. The given data shows how 50 employees of a company travel to office.

Mode of Transport	Walking	Private Vehicle	Taxi	Train	Auto Rickshaw
Number of Employees	2	14	12	18	4

Draw a bar graph to show the given data.