

Maharashtra Board
Class VII
Mathematics

Time: 2 hr 30

Sample Paper – 3

Total Marks: 60

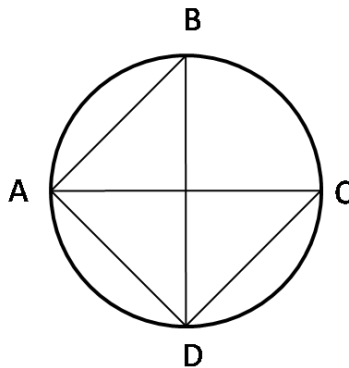
min Note:

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

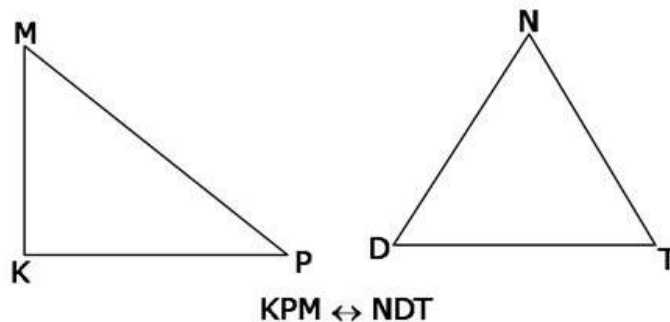
Q1. Solve the following:

[12 × 1 = 12]

1. In the figure given below, $m\angle ACD = 45^\circ$, then $m\angle ABD = ?$

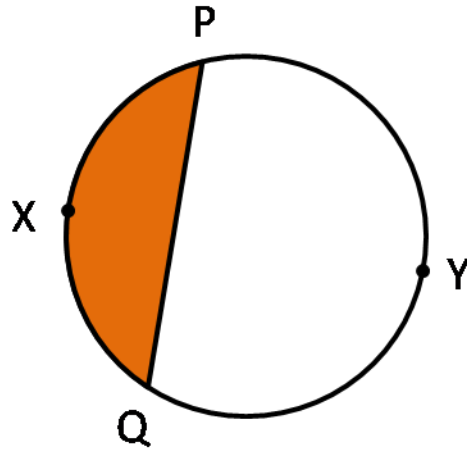


2. Calculate S.P. when C.P. is Rs. 897 and Loss is Rs. 190.
3. What is the area of a mirror with length 100.5 cm and breadth 56.4 cm?
4. In each example, show the given one to one correspondence between vertices using arrows.



5. Expand $(4 - x)^2$
6. Factorize the expression $144mn - 48m$.
7. One diagonal of a rectangle measures 10.6 cm. What is the length of the other diagonal?

8. Name the minor and the major segment from the following figure.



9. The area of one face of a cube is 24 cm^2 . What is the total surface area of the cube?

10. Find the common factors of $45x^2y$ and $65y^2$

11. What is the multiplicative inverse of -100 ?

12. Name the quadrilateral which has only one pair of parallel sides.

Q2. Solve the following:

[8 × 2 = 16]

1. Mr Shah bought a refrigerator for Rs. 12,500 and spent Rs. 947 on its repairs and Rs. 450 on the transport charges. He then sold the refrigerator for Rs. 10,478. Find the profit or loss made.

2. Verify the identity $(x - y)(x + y) = x^2 - y^2$ for $x = \frac{3}{2}$ and $y = \frac{1}{2}$.

3. Show the following rational numbers on the number line.

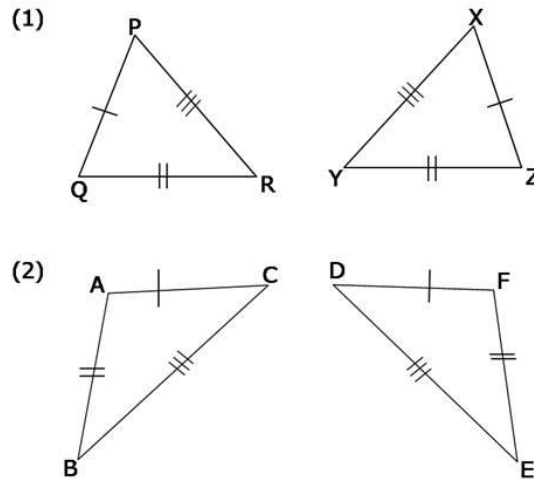
$$\frac{1}{5}, \frac{3}{5}, \frac{5}{5}, \frac{7}{5}, \frac{-2}{5}, \frac{-4}{5}$$

4. Find the product of 57×63 by using the formula.

5. The dimensions of a garden are $80 \text{ m} \times 45 \text{ m}$. The garden has a pathway of 2 m width around its border. What is the area of the pathway?

6. A 1.8 km long and 8 m wide road is to be laid with road metal of 15 cm thickness. How many cubic metres of road metal will be required for the purpose?

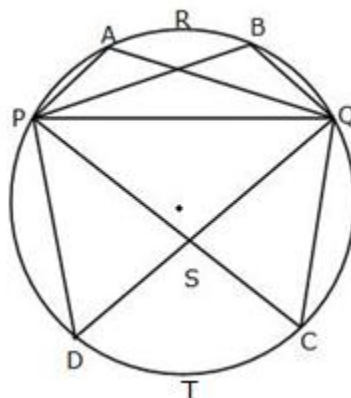
7. Three angles of a quadrilateral are equal and the measure of the fourth angle is 60° . Find the measure of each of the equal angles.
8. Given below are some congruent triangles. Identify and write the correspondence in which they are congruent.



Q3. Solve the following [Any five]:

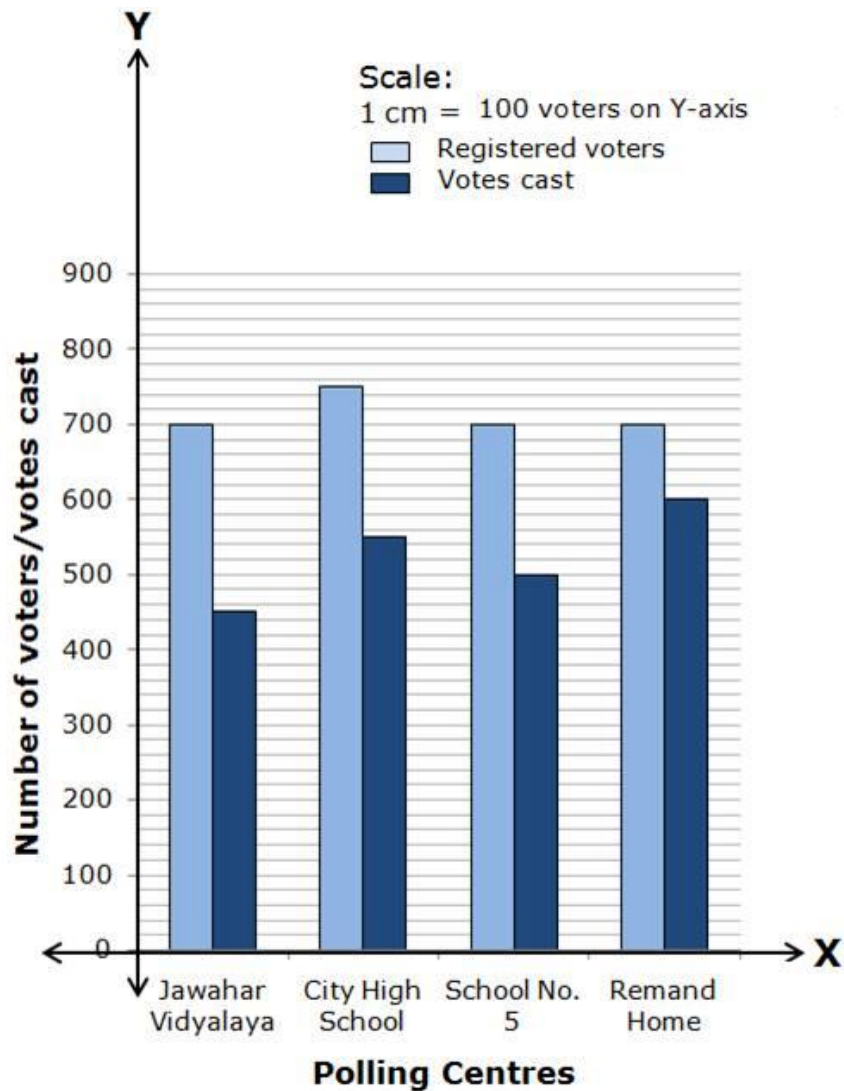
[5 × 3 = 15]

- Damuseth bought a washing machine for Rs. 10,000. When he sold it to a customer he incurred a loss of 12%. How much did he sell it for?
- $\triangle LMN$ and $\triangle TUV$ are congruent in correspondence $L \leftrightarrow U$, $M \leftrightarrow V$ and $N \leftrightarrow T$.
 - Write three pairs of congruent angles.
 - Write three pairs of congruent sides.
- Use the rules to determine which number is bigger and which is smaller.
 $-10, \frac{-83}{9}$
- Look at the figure and answer the following questions.



- Name the angles in the minor segment PRQ.
- Name the angles in the major segment PTQ.
- Name the pairs of angles in the same segment made by chord PQ.

5. A plot of land 75.5 m long and 30.5 m broad was sold at the rate of Rs. 550 per sq. m. What was its selling price?
6. The owner of Vishal Furnitures bought a cupboard for Rs. 6500. For how much should he sell it in order to make 15% profit?
7. There are four polling centers for a certain election. The number of voters registered at every center and the number of votes actually cast there are shown in the joint bar graph below.

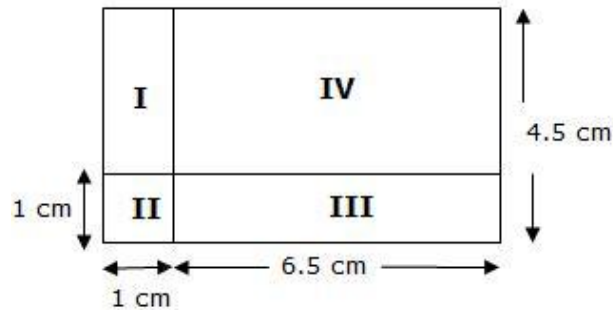


- (i) What is the number of voters registered at Jawahar Vidyalaya center and the actual number of votes cast?
- (ii) Which polling center has the largest number of registered voters?
- (iii) At which polling center was the largest number of votes cast?

Q4. Solve the following [Any three]:

[3 × 4 =12]

1. Look at the figure below and answer the questions.

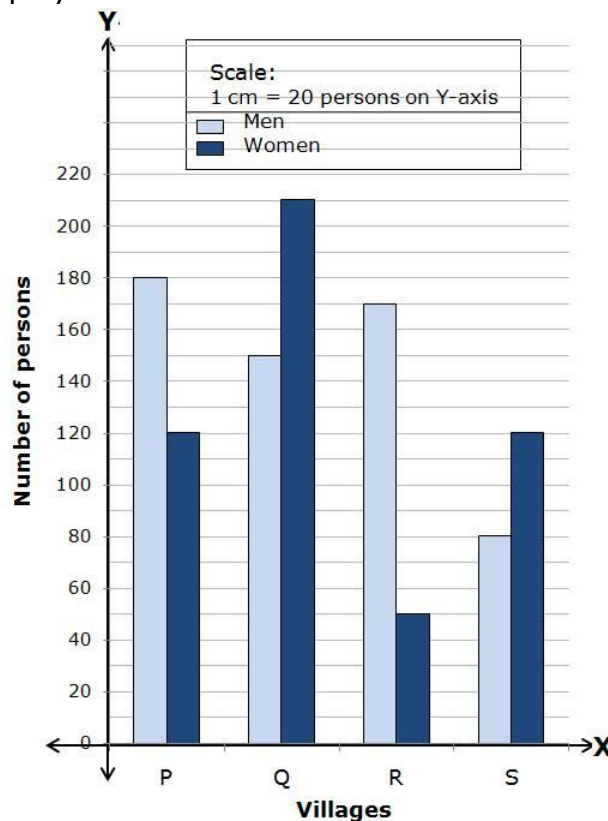


- (i) What is the area of part I?
- (ii) What is the area of part II?
- (iii) What is the area of part III?
- (iv) What is the area of part IV?

2. If the sides of certain cube are as given below, find the total surface area of each:

- (i) 6.8 m
- (ii) 9.3 cm

3. The joint bar graph below shows the number of men and women employed under the Employment Guarantee Scheme in the four villages P, Q, R, S.



- (i) How many people in village R are getting the benefit of the EGS?
- (ii) Which village has the most women beneficiaries?
- (iii) How many male and female beneficiaries are there in village S?
- (iv) Does village P have more men or women beneficiaries?

4. Draw seg LM and on it draw a square LMNP.

5. Factorise:

(i) $1 - \frac{36m^2}{49n^2}$

(ii) $1 - 8a + 16a^2$

Q5. Solve the following [Any one]:

[1 × 5 = 5]

1. A wooden cube-shaped box has a total surface area of 486 sq. cm. What is its volume? What will it cost to laminate the outer surfaces of this box at the rate of Rs. 1.50 sq. cm?
2. Draw a joint bar graph based on the following data.

Subject	Maths	Science	History	English
Snehal's score	80	64	70	85
Vicky's Score	65	72	80	60