



विद्या सर्वार्थ साधिका

ANANDALAYA
PERIODIC TEST 3
Class : VII

Subject: Mathematics
Date : 04 - 01- 2024

M.M: 30
Time: 1Hr. 30 min.

General Instructions:

- This question paper has 4 sections, A, B, C and D.
- Section A has 7 questions carrying 1 mark each.
- Section B has 5 questions carrying 2 marks each.
- Section C has 3 questions carrying 3 marks each.
- Section D has 1 case based question carrying 4 marks with subparts of values of 2, 1 and 1 mark each respectively.
- All questions are compulsory. However, an internal choice of 2 questions of 2 marks and 1 question of 3 marks has been provided.

Section-A

- In ΔPQR , if $\angle P = 60^\circ$ and $\angle Q = 40^\circ$, then what is the measure of the exterior angle formed by producing QR. (1)
- Convert $\frac{6}{25}$ to percent. (1)
- Find 60% of ₹ 300. (1)
- Pick out the rational numbers from the following and write them (1)
 $\frac{1}{3}$ 0 6 $\frac{0}{5}$ $\frac{8}{0}$
- Fill in the box to make the statement true: (1)
a) $\frac{12}{15} = \frac{\square}{5}$ b) $\frac{-7}{4} = \frac{-56}{\square}$
- Write any two rational number between -1 and 0. (1)
- Given below are two statements, P and Q, about a triangle: (1)
P: If two sides of a triangle are 4 cm and 6 cm long, then the third side can be 2 cm long.
Q: Sum of the lengths of any two sides of a triangle is greater than the length of third side.
Then,
(a) both P and Q are true.
(b) P is true and Q is false.
(c) P is false and Q is true.
(d) both P and Q are false.

Section-B

- Sarita buys a radio for ₹ 2200 and sells it for a profit of 20%. What is the selling price of the radio? (2)
- OR**
- Mr. Malhotra sells a TV for ₹ 8400, making a profit of 20%. What was the cost price of the TV?
- By selling an article for ₹760, Salman loses 5%. If he had sold it for ₹ 840, he would have gained 5%. What is the cost price of the article? (2)

10. In triangle XYZ, the measure of angle X is 30° greater than the measure of angle Y and angle Z is a right angle. Find the measure of angle Y. (2)
11. Show the rational number $\frac{-17}{8}$ and $\frac{-3}{8}$ on the number line. (2)

OR

Arrange the given rational numbers in descending order:

$$\frac{3}{8}$$

$$\frac{5}{12}$$

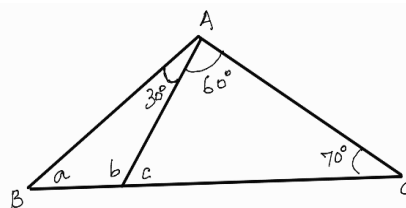
$$\frac{-7}{16}$$

$$\frac{-2}{3}$$

12. a) If 12 shirts of equal sizes can be prepared from 27 m cloth, what is the length of cloth required for each shirt? (2)
- b) Sheela purchased six $\frac{1}{4}l$ of milk packets. How many litres of milk did she purchase? Express your answer in mixed fraction.

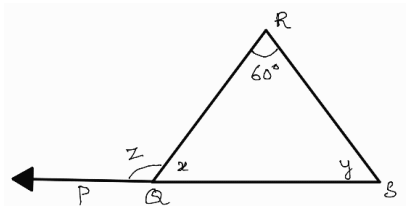
Section-C

13. In triangle ABC, as shown in the figure, find the measures of a, b and c. (3)



OR

In triangle QRS, as shown in the figure, if y is five times x, find the value of z.

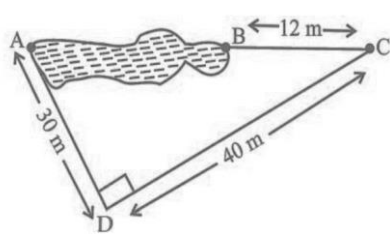


14. Mr. Joseph took a loan from the bank for ₹ 64,000 at the rate of 11% per annum for three years at simple interest. (3)
- a) How much interest and amount will he have to pay back after three years?
- b) What would have been the rate of interest if he has to pay only ₹ 19,200 as interest for the same sum of money for three years?
15. Solve the following: (3)

- a) Add: $\frac{6}{11} + \left(\frac{-3}{4}\right)$
- b) Multiply: $\left(\frac{-4}{9}\right) \times \left(\frac{-7}{8}\right)$
- c) Divide: $\left(\frac{-7}{8}\right) \div \left(\frac{-3}{6}\right)$

Section-D

17. Points A and B are on the opposite sides of a pond as shown in the figure. To find the distance between the two points, Raghu makes a right-angled triangle using rope connecting B with another point C at a distance of 12 m, connecting C to point D at a distance of 40 m and then connecting D to the point A which is at a distance of 30 m such that $\angle ADC = 90^\circ$. (4)



- a) Find the length of AC. (2)
- b) Find the length of AB. (1)
- c) What is the total length of the rope used? 30° 60° (1)