

I. Choose the best answer.

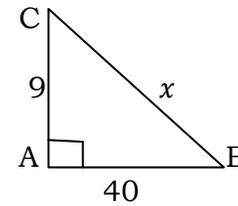
- If 30% of  $x$  is 150, then  $x$  is \_\_\_\_\_  
a) 500                      b) 600                      c) 200                      d) 350
- 2 minutes is \_\_\_\_\_% to an hour.  
a)  $\frac{1}{3}$ %                      b)  $3\frac{1}{3}$ %                      c)  $\frac{2}{3}$ %                      d)  $\frac{12}{3}$ %
- 0.5252 is \_\_\_\_\_%  
a) 0.5                      b) 52.5                      c) 52.52                      d) 0.52
- 15% of 25% of 10000= \_\_\_\_\_  
a) 375                      b) 400                      c) 425                      d) 475
- Increase the quantity by  $x$  % we will get the increased quantity \_\_\_\_\_  
a)  $I = (1 + \frac{x}{100})A$                       b)  $I = (1 - \frac{x}{100})A$                       c)  $I = (1 - \frac{A}{100})$                       d)  $I = (1 + \frac{A}{100})$
- The total bill amount of a shirt costing Rs. 575 and a T-shirts costing Rs. 325 with GST of 5% is \_\_\_\_\_  
a) 900                      b) 945                      c) 800                      d) 975
- Loss or gain percentage is always calculated on the \_\_\_\_\_  
a) Selling Price                      b) Marked Price                      c) Cost price                      d) Discount
- An article is sold for Rs. 555 at a loss of  $7\frac{1}{2}$ %, The cost price of article is \_\_\_\_\_  
a) 525                      b) 600                      c) 625                      d) 475
- Discount = \_\_\_\_\_  
a) Selling price – Cost price                      b) Cost price-Marked price  
c) Selling price-Profit                      d) Marked price-selling
- Loss% = \_\_\_\_\_  
a) Selling Price +Cost Price                      b)  $(\frac{Loss}{C.P} \times 100) \%$   
c)  $(\frac{Profit}{C.P} \times 100)\%$                       d) Cost Price -Selling price
- If  $\Delta PQR$ ,  $PR^2 = PQ^2 + QR^2$ , then the right angle of  $\Delta PQR$  is at the vertex \_\_\_\_\_  
a) P                      b) Q                      c) R                      d) P<sup>2</sup>
- If the sides of a triangle are in the ratio 5: 12: 13 then it is \_\_\_\_\_  
a) Triangle                      b) Square                      c) Rectangle                      d) Right angled triangle
- If a perpendicular is drawn to the hypotenuse of right angled triangle, then each of the three pairs of triangles formed are \_\_\_\_\_  
a) Equal                      b) Not equal                      c) Similar                      d) Not similar
- If the square of the hypotenuse of an isosceles triangle is  $50\text{cm}^2$ , the length of each side is \_\_\_\_\_  
a) 25 cm                      b) 5 cm                      c) 10 cm                      d) 20cm

- In a right angled triangle, the square on the \_\_\_\_\_ is equal to the sum of the squares on the other two sides.  
a) Hypotenuse                      b) Opposite                      c) Right angle                      d) Adjacent

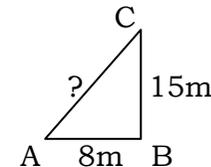
II. Answer (Any 9) of the following. (9× 3 = 27)

Question 27 compulsory [either “a” or “b”]

- Say True or False.  
i) 8, 15, 17 is a phthagorean triplet  
ii) In a right angled triangle, the hypotenuse is the greatest side.  
iii) Pythagoras theorem is true for all types of triangles.
- Check whether given sides are the sides of right angled triangles, using pythagoras theorem (i) 8, 15, 17
- Find the unknown side of the following figure.



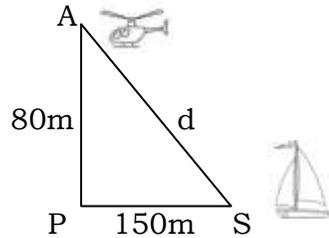
- If selling an article for Rs. 820 causes 10% loss on the selling price, find the cost price.
- Find the selling price, if marked price is Rs. 225 with discount 8%.
- By selling a bicycle for Rs. 4275, a shopkeeper loses 5%. Find the cost price.
- If  $x\%$  of 600 is 450, then find the value of  $x$ .
- If a car is sold for Rs. 200000 from its original price of Rs. 3,00,000. find the percentage decrease in the value of car.
- What is 25% of 30% of 400?
- A bank pays Rs. 240 as interest for 2 yrs for a sum of Rs. 3000 deposited as savings. Find the rate of interest given by the bank.
- Find AC, if AB=8m and BC=15m, from the figure.



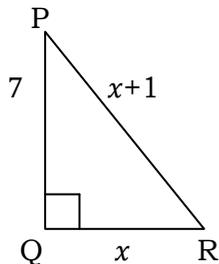
- The price of a raincoat was slashed from Rs. 1060 to Rs. 901 by a shopkeeper in the winter season to the boost the sales. Find the rate of discount given by him. (or)
  - 48 is 32% of what number?

III. Answer (Any 5 ) of the following. (5× 5 = 25)  
 Question No. 36 is compulsory [either “a” or “b”]

28. A number when increased by 18% gives 236. Find the number
29. If the numerator of fraction is increase by 25% and the denominator is increased by 10% it becomes  $\frac{2}{5}$ . Find the original fraction.
30. A student get 31% marks in an examination but fails by 12 marks. If the pass percentage is 35%. Find the maximum marks of the examination.
31. A man sold two gas stoves for Rs. 8400 each. He sold one at again of 20% and the other at a loss of 20%. Find his gain or loss% in the whole transaction.
32. Find the total bill amount for the school bag.  
 Marked Price=Rs. 500, Discount=5% GST=12%
33. If a mattress is marked for Rs. 7500 and is available at two successive discounts of 10% and 20%, find the amount to be paid by the customer.
34. Find the distance between the helicopter and the ship.



35. In the figure, find PR and QR



36. a) Match the following.

- |                         |                                    |
|-------------------------|------------------------------------|
| i) Profit               | - $AB^2+AC^2$                      |
| ii) Discount            | - $(\frac{Loss}{CP} \times 100)\%$ |
| iii) Increased quantity | - Selling Price – Cost Price       |
| iv) Loss%               | - $I=(1+\frac{x}{100})A$           |
| v) $BC^2$               | - Marked Price – Selling Price     |

(or)

- b) A 20 feet ladder leans against a wall at height of 16 feet from the ground. How far is the base of the ladder from the wall?

IV. Geometry (Any 1). [either ‘a’ or ‘b’] (1× 8 = 8)

37. A) Construct the following trapeziums with the given measurements and also find their areas. AIMS with  $\overline{AI} \parallel \overline{SM}$ ,  
 AI =6 cm, IM=5 cm, AM=9 cm and MS 6.5 cm

(or)

- b) Construct the following trapeziums with the given measures and also find their area. BIKE with  $\overline{BI} \parallel \overline{EK}$ , BI=4 cm, IK=3.5 cm  
 BK= 6 cm and BE = 3.5 cm