MATHS

BOOKS - BAL BHARTI

PYTHAGORAS THEOREM

Examples

1. Altitude on the hypotenuse of a right angle triangle divides it in two parts of length 4 cm and 9 cm. Find the length of the altitude. a) 9cm b) 4cm c) 6cm d) 18cm

Watch Video Solution

2. In ΔPQR, PM = 15, PQ = 25, PR = 20, NR = 8. State whether line NM is parallel to side RQ. Give reason.

Watch Video Solution

3. In

$\therefore \Delta ABC, segAD \perp segBC$ and $DB = 3CD.$ Prove that : $2AB^2 = 2A$

Watch Video Solution

4. In

$\therefore \Delta ABC, segAD \perp segBC$ and $DB = 3CD.$ Prove that : $2AB^2 = 2A$

Watch Video Solution

5. Prove that the sum of the squares of the diagonals of a parallelogram is equal to the sum to the squares of its sides.

Watch Video Solution

Practice Set 2 1

1. Which of the following is a Pythagorean triplet?

Watch Video Solution

2. Which of the following is a Pythagorean triplet?

Watch Video Solution

3. Which of the following is a Pythagorean triplet?

Watch Video Solution

4. Which of the following is a Pythagorean triplet?

Watch Video Solution

5. Which of the following is a Pythagorean triplet?

Watch Video Solution

6. Which of the following is a Pythagorean triplet?

Watch Video Solution

7. Find the side and perimeter of a square whose diagonal is 10 cm.

Watch Video Solution

8. Find the diagonal of a rectangle whose length is 16 cm and area is 192 sq.cm.

Watch Video Solution

9. Walls of two buildings on either side of a street are parallel to each other. A ladder 5.8m long is placed on the street such that its top just

reaches the window of a building at the height of 4m. On turning the ladder over to the other side of the street, its top touches the window of the other building at a height 4.2m. Find the width of the street.

Watch Video Solution

Practice Set 2 2

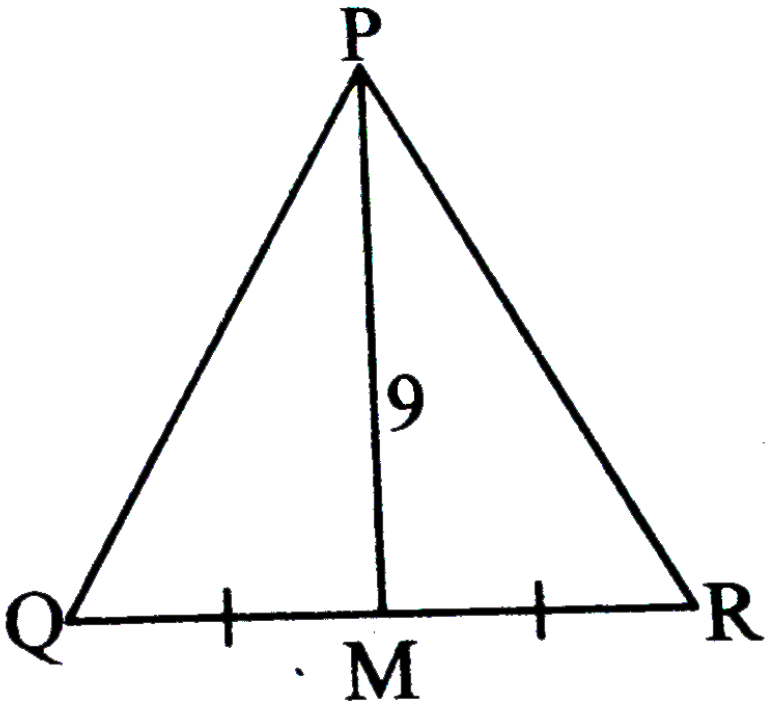
1. In $\triangle PQR$, point S is the midpoint of side QR. If PQ=11, PR=17, PS=13, then find QR.

Watch Video Solution

2. In $\triangle ABC$, AB=10, AC=7, BC=9. Find the length of the median drawn from point C to side AB.

Watch Video Solution

3. In the given figure, seg PM is a median of ΔPQR. $PM = 9$ and $PQ^2 + PR^2 = 290$, then find QR.



Watch Video Solution

Practice Set 2

1. Which of the following is a Pythagorean triplet?

A. (1,5,10)

B. (3,4,5)

C. (2,2,2)

D. (5,5,2)

Answer: B

Watch Video Solution

2. In a right angled triangle, if sum of the squares of the sides making right angle is 169 then what is the length of the hypotenuse? a)12 b)13 c)15 d)5

A. 15

B. 13

C. 5

D. 12

Answer: B

Watch Video Solution

3. Choose the correct altenative : out of the dates given below which date contitutes a pythagorean triplet?

A. $\frac{15}{08}/17$

B. $\frac{16}{08}/16$

C. $\frac{3}{5}/17$

D. $\frac{4}{9}/15$

Answer: A

Watch Video Solution

4. If a, b, c are in A.P. and a^2, b^2, c^2 are in H.P then

A. Obtuse angled triangle

B. Acute angled triangle

C. Right angled triangle

D. Equilateral triangle

Answer: C

Watch Video Solution

5. Find the side and perimeter of a square whose diagonal is 10 cm.

A. 10 cm

B. $40\sqrt{2}$ cm

C. $20cm$

D. $40cm$

Answer: D

Watch Video Solution

6. Altitude on the hypotenuse of a right angle triangle divides it in two parts of length 4 cm and 9 cm. Find the length of the altitude. a) 9cm b) 4cm c) 6cm d) 18cm

A. 9 cm

B. 4 cm

C. 6 cm

D. $2\sqrt{6}$ cm

Answer: C

Watch Video Solution

7. Height and base of a right angled triangle are 24 cm and 18 cm, find the length of its hypotenuse. a) 24cm b) 30cm c) 15cm d) 18cm

A. 24 cm

B. 30 cm

C. 15 cm

D. 18 cm

Answer: B

Watch Video Solution

8. In $\triangle ABC$, $AB = 6\sqrt{3}cm$, AC=12 cm, BC=6 cm. Find measure of $\angle B$

A. 30°

B. 60°

C. 90°

D. 45°

Answer: A

Watch Video Solution

9. Find the height of an equilateral triangle having side 2a.

Watch Video Solution

10. Do sides 7 cm, 24 cm, 25 cm from a right angled triangle? Give reason.

Watch Video Solution

11. Find the length of diagonal of a rectangle having dimensions 11 cm and 60 cm.

Watch Video Solution

12. Find the length of the hypotenuse of a right angled triangle if remaining sides are 9 cm and 12 cm.

Watch Video Solution

13. Side of isosceles right angled triangle is x. Find its hypotenuse.

Watch Video Solution

14. Solve the following examples. In $\Delta PQR: PQ = \sqrt{8}, QR = \sqrt{5}, PR\sqrt{3}$. Is Δ PQR a right angled triangle? If yes , which angle is of 90° ?

Watch Video Solution

15. In $\Delta ABC, \angle B = 90^\circ, \angle A = 30^\circ, AC = 14,$ then find AB and BC.

Watch Video Solution

16. Find the diagonal of a rectangle whose length is 16 cm and area is 192 sq.cm.

Watch Video Solution

17. Find the length of the side and perimeter of an equilateral triangle whose height is $\sqrt{3}$ cm.

Watch Video Solution

18. In $\triangle ABC$, seg AP is a median. If $BC = 18$, $AB^2 + AC^2 = 260$, then find AP.

Watch Video Solution

19. $\triangle ABC$ is an equilateral triangle. Point P is on base BC such that PC= $\frac{1}{3}BC$, if AB=6 cm, find AP.

Watch Video Solution

20. Prove that the sum of the squares of the diagonals of a parallelogram is equal to the sum to the squares of its sides.

Watch Video Solution

21. Pratik takes 8 hours to travel 36 km downstream and return to same spot. The speed of boat in still water is 12km/hr. Find the speed of the water current.

Watch Video Solution

22. In $\Delta ABC, \angle BAC = 90^\circ$ seg BL and seg CM are medians of ΔABC. Then prove that $4\left(BL^2 + CM^2\right) = 5BC^2$.

Watch Video Solution

23. Sum of the squares of adjacent sides of a parallelogram is 130 cm length of one of its diagonals is 14 cm. Find the length of the other diagonal.

Watch Video Solution

24. In $\therefore \Delta ABC, segAD \perp segBC$ and $DB = 3CD$. Prove that : $2AB^2 = 2A$

Watch Video Solution

25. In an isosceles triangle, length of each congruent side is 13 cm and length of the base is 10 cm. Find the distance between vertex opposite to base and centroid.

Watch Video Solution

26. Seg PM is a median of $\triangle PQR$. If PQ=40, PR=42 and PM=29, find QR.

Watch Video Solution

27. Seg AM is a median of $\triangle ABC$. If AB=22, AC=34, BC=24, find AM.

Watch Video Solution