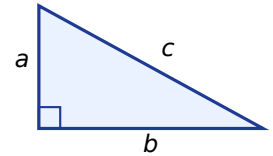


CLASS 8 MATHEMATICS

CHAPTER 2

The Baudhayana-Pythagoras Theorem

In a right triangle,
 $a^2 + b^2 = c^2$



Name : _____

Class : VIII

Date : _____

A MULTIPLE CHOICE QUESTIONS (1 mark each)

- In a right-angled triangle, the longest side is called:
a) Base b) Height c) Hypotenuse d) Median
- If the legs of a right triangle are 6 cm and 8 cm, the hypotenuse is:
a) 9 cm b) 10 cm c) 12 cm d) 14 cm
- Which of the following is a Pythagorean triple?
a) (4, 5, 6) b) (5, 12, 13) c) (7, 8, 10) d) (2, 3, 4)
- The diagonal of a square of side 8 cm is:
a) $8\sqrt{2}$ cm b) 16 cm c) $4\sqrt{2}$ cm d) 10 cm

B FILL IN THE BLANKS

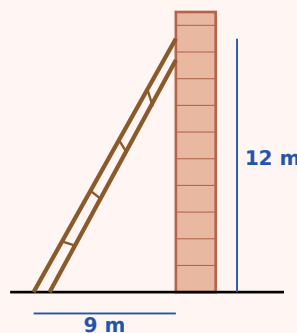
- The theorem applies only to _____ triangles.
- The side opposite the right angle is the _____.
- If $a^2 + b^2 = c^2$, then the triangle is a _____ triangle.
- The diagonal of a square divides it into _____ equal triangles.

C TRUE OR FALSE

- Every triangle satisfies the Pythagoras theorem.
- (8, 15, 17) is a Pythagorean triple.
- The hypotenuse is always the longest side.
- Doubling the side of a square doubles its area.

F CASE STUDY

A ladder is placed against a wall. The foot of the ladder is 9 m from the wall, and the top touches the wall at a height of 12 m.



- Which theorem can be used?
- Find the length of the ladder.
- Is (9, 12, 15) a Pythagorean triple?
- If the wall height becomes 16 m while the base remains 12 m, find the ladder length.

D MATCH THE COLUMNS

Column A	Column B
1. Hypotenuse	A. Longest side
2. Square diagonal	B. Right-angled triangle
3. Pythagorean triple	C. $\sqrt{2} \times \text{side}$
4. Right angle	D. (3, 4, 5)

E ASSERTION-REASON

Assertion (A): In a right triangle, the square of the hypotenuse equals the sum of the squares of the other two sides.

Reason (R): This is known as the Baudhayana-Pythagoras Theorem.

- Both A and R are true, and R is the correct explanation.
- Both are true, but R is not the correct explanation.
- A is true, R is false.
- A is false, R is true.

G HOTS

A square has a diagonal of $10\sqrt{2}$ cm. Find:

- The side of the square.
- The area of the square.

