

CHAPTER-2 | The Baudhāyana-pythagoras Theorem

QUIZ PART-07

1. In an isosceles right triangle, if each equal side is 10 cm, the hypotenuse is:

A. 10 cm
B. 20 cm
C. $10\sqrt{2}$ cm
D. $10\sqrt{3}$ cm (C)

Explanation : In an isosceles right triangle,
Hypotenuse = Side $\times \sqrt{2}$.

2. The general formula for the hypotenuse of an isosceles right triangle with side length 'a' is:

A. a^2
B. $2a$
C. $a\sqrt{2}$
D. $a\sqrt{3}$ (C)

Explanation: The hypotenuse is obtained by multiplying the equal side by $\sqrt{2}$.

3. If the equal sides of an isosceles right triangle are 12 cm, the hypotenuse is:

A. 12 cm
B. 24 cm
C. $12\sqrt{2}$ cm
D. $12\sqrt{3}$ cm (C)

Explanation: Hypotenuse = $12 \times \sqrt{2} = 12\sqrt{2}$ cm.

4. If the hypotenuse of an isosceles right triangle is $\sqrt{72}$, each equal side is:

A. 3 cm
B. 6 cm
C. 9 cm
D. 12 cm (B)

Explanation: $\sqrt{72} = 6\sqrt{2}$, so each equal side is 6 cm.

5. In an isosceles right triangle, the two equal sides form the:

A. Acute angle
B. Straight angle
C. Right angle
D. Reflex angle (C)

Explanation : The equal sides meet at the 90° angle.

6. If each equal side is 6 cm, the hypotenuse is:

A. 6 cm
B. $6\sqrt{2}$ cm
C. 12 cm
D. $3\sqrt{2}$ cm (B)

Explanation : Hypotenuse = $6 \times \sqrt{2} = 6\sqrt{2}$ cm.

7. The hypotenuse of an isosceles right triangle with equal sides 9 cm is:

A. 9 cm
B. 18 cm
C. $9\sqrt{2}$ cm
D. $9\sqrt{3}$ cm (C)

Explanation : Hypotenuse = $9 \times \sqrt{2} = 9\sqrt{2}$ cm.

8. If the hypotenuse is $8\sqrt{2}$ cm, each equal side is:

A. 4 cm
B. 8 cm
C. 16 cm
D. $8\sqrt{2}$ cm (B)

Explanation : Side = Hypotenuse $\div \sqrt{2} = 8$ cm.

9. Which number is multiplied by the side length to get the hypotenuse of an isosceles right triangle?

A. $\sqrt{2}$
B. $\sqrt{3}$
C. 2
D. 3 (A)

Explanation : The chapter derives the relation
Hypotenuse = Side $\times \sqrt{2}$.

10. If each equal side of an isosceles right triangle is 5 cm, the hypotenuse is:

A. 5 cm
B. 10 cm
C. $5\sqrt{2}$ cm
D. $5\sqrt{3}$ cm (C)

Explanation : In an isosceles right triangle, the hypotenuse is equal to the side length multiplied by $\sqrt{2}$. Therefore, Hypotenuse = $5 \times \sqrt{2} = 5\sqrt{2}$ cm.