

CHAPTER-2 | The Baudhāyana-pythagoras Theorem

QUIZ PART-09

1. To combine two different squares, we first mark a _____ portion of the larger square.

A. Triangular
B. Circular
C. Rectangular
D. Square (C)

Explanation : Baudhāyana's method begins by marking a rectangular portion in the larger square.

2. The diagonal of the rectangle becomes the side of a square whose area is:

A. The difference of the two square areas
B. Equal to the larger square only
C. Equal to the smaller square only
D. The sum of the two square areas (D)

Explanation: The diagonal forms a square whose area equals the sum of the two original square areas.

3. In Baudhāyana's instructions, the first step is to:

A. Draw a circle
B. Join the two squares
C. Find the perimeter
D. Draw a triangle (B)

Explanation: The chapter starts by joining the two squares together.

4. The new four-sided figure obtained in the construction is actually a:

A. Rectangle
B. Rhombus
C. Square
D. Trapezium (C)

Explanation: The chapter proves that the four-sided figure formed is a square.

5. All angles of the new four-sided figure are:

A. Acute angles
B. Obtuse angles
C. Right angles
D. Reflex angles (C)

Explanation : Since all four angles are right angles, the figure is a square.

6. The area of the square on the hypotenuse equals:

A. Area of T only
B. Area of U only
C. Area of V only
D. Sum of T, U and V (D)

Explanation : The chapter states that the area of the square on the hypotenuse equals the sum of T, U and V.

7. If two squares have areas 36 cm^2 and 64 cm^2 , the area of the combined square is:

A. 90 cm^2
B. 100 cm^2
C. 110 cm^2
D. 120 cm^2 (B)

Explanation : The combined square has area $36 + 64 = 100 \text{ cm}^2$.

8. The area of the square on the hypotenuse is equal to the sum of the areas of the:

A. Two given squares
B. Larger square only
C. Smaller square only
D. Rectangle only (A)

Explanation : This is the key idea demonstrated by Baudhāyana's construction.

9. If the shorter sides of a right triangle are 16 cm and 12 cm, the hypotenuse is:

A. 20 cm
B. 25 cm
C. 15 cm
D. 10 cm (A)

Explanation : $16^2 + 12^2 = 256 + 144 = 400$, and $\sqrt{400} = 20 \text{ cm}$.

10. The symbols a and b in the construction represent:

A. Angles only
B. Side lengths of the two squares
C. Areas only
D. Diagonals only (B)

Explanation : The chapter uses a and b to denote the side lengths of the two squares being combined.