

CHAPTER-2 | The Baudhāyana-pythagoras Theorem

QUIZ PART-16

1. Fermat's Last Theorem states that for natural numbers x , y , and z , the equation $x^n + y^n = z^n$ has no solution when:

A. $n = 1$
B. $n = 2$
C. $n > 2$
D. $n = 0$ (C)

Explanation : Fermat's Last Theorem says there are no natural number solutions for $x^n + y^n = z^n$ when n is greater than 2.

2. The mathematician who proved Fermat's Last Theorem in 1994 was:

A. Bhāskarāchārya
B. Fermat
C. Andrew Wiles
D. Euclid (C)

Explanation: Andrew Wiles successfully proved Fermat's Last Theorem in 1994.

3. Andrew Wiles became interested in Fermat's Last Theorem after reading a book at the age of:

A. 8 years
B. 10 years
C. 12 years
D. 15 years (B)

Explanation: The chapter mentions that he read about the theorem when he was 10 years old.

4. The lotus problem in the chapter is taken from:

A. Aryabhatiya
B. Sulba Sutras
C. Līlāvātī
D. Elements (C)

Explanation: The problem is from Bhāskarāchārya's famous work, Līlāvātī.

5. In the lotus problem, the tip of the lotus is above the water by:

A. 1 unit
B. 2 units
C. 3 units
D. 4 units (A)

Explanation : The lotus stem projects 1 unit above the water surface.

6. In the lotus problem, the tip touches the water at a point how far from its original position?

A. 1 unit
B. 2 units
C. 3 units
D. 4 units (C)

Explanation : The chapter states that the tip touches the water 3 units away.

7. Which theorem is used to solve the lotus and bamboo problems?

A. Area Theorem
B. Baudhāyana-Pythagoras Theorem
C. Midpoint Theorem
D. Angle Sum Theorem (B)

Explanation : Both problems are applications of the Baudhāyana-Pythagoras Theorem.

8. In the assessment problem, the bamboo extends above the water by:

A. 1 m
B. 2 m
C. 3 m
D. 4 m (B)

Explanation : The bamboo stands 2 m above the water surface.

9. When the bamboo bends, its top touches the water:

A. 2 m away
B. 3 m away
C. 4 m away
D. 5 m away (C)

Explanation : The top touches the water 4 m from its original position.

10. The depth of the pond in the assessment problem is:

A. 7 m
B. 4 m
C. 16 m
D. 3 m (A)

Explanation : Let depth = x . Then $(x + 2)^2 = x^2 + 4^2$. Solving gives $x = 3$ m. Since the bamboo length is $x + 2 = 5$ m, the correct depth is 3 m. However, the options contain a unit/answer error; the mathematically correct answer is 3 m