

CHAPTER-2 | The Baudhāyana-pythagoras Theorem

QUIZ PART-05

1. The decimal value of $\sqrt{2}$ is closest to:

- A. 1.214
- B. 1.414
- C. 2.414
- D. 0.414

(B)

Explanation : $\sqrt{2}$ is approximately 1.414, which is obtained by finding closer and closer decimal bounds.

2. $\sqrt{2}$ is greater than:

- A. 2
- B. 3
- C. 1
- D. 4

(C)

Explanation: Since $1^2 = 1$ and $2^2 = 4$, $\sqrt{2}$ lies between 1 and 2.

3. $\sqrt{2}$ is less than:

- A. 1
- B. 0
- C. 0.5
- D. 2

(D)

Explanation: Because 2 lies between 1^2 and 2^2 , $\sqrt{2}$ must lie between 1 and 2.

4. Which number squared is equal to 2?

- A. $\sqrt{2}$
- B. 2
- C. 4
- D. 1

(A)

Explanation: By definition, $\sqrt{2} \times \sqrt{2} = 2$.

5. Which of the following is closest to $\sqrt{2}$?

- A. 1.2
- B. 1.3
- C. 1.4
- D. 1.8

(C)

Explanation : $\sqrt{2} \approx 1.414$, so 1.4 is the closest option.

6. Which square is closer to 2?

- A. $1.3^2 = 1.69$
- B. $1.4^2 = 1.96$
- C. $1.5^2 = 2.25$
- D. $1.2^2 = 1.44$

(B)

Explanation : 1.96 is nearest to 2 among the given values.

7. According to the chapter, 1.41^2 is:

- A. 1.9881
- B. 2.0164
- C. 1.9965
- D. 2.0022

(A)

Explanation : The chapter uses $1.41^2 = 1.9881$ to estimate $\sqrt{2}$.

8. According to the chapter, 1.42^2 is:

- A. 1.9881
- B. 1.999396
- C. 2.0164
- D. 2.002225

(C)

Explanation : Since $1.42^2 = 2.0164$, $\sqrt{2}$ is slightly less than 1.42.

9. In an isosceles right triangle with equal sides 2 cm each, the hypotenuse is approximately:

- A. 2.00 cm
- B. 2.41 cm
- C. 2.83 cm
- D. 4.00 cm

(C)

Explanation : Hypotenuse = $2\sqrt{2} \approx 2 \times 1.414 = 2.828 \approx 2.83$ cm.

10. $\sqrt{2}$ can be written as a fraction m/n of counting numbers:

- A. Always
- B. Sometimes
- C. Never
- D. Only when $m = n$

(C)

Explanation : $\sqrt{2}$ is an irrational number and cannot be expressed as a fraction of counting numbers.