

CHAPTER-5 | Prime Time

QUIZ-01

1. What number will be spoken instead of 15 in the 'idli-vada' game?

- A. idli B. vada
C. idli-vada D. 15 (C)

Explanation: 15 is a multiple of both 3 and 5, so players say "idli-vada".

2. Which of these is a common multiple of 3 and 5?

- A. 6 B. 10
C. 15 D. 12 (C)

Explanation: 15 is the lowest number divisible by both 3 and 5.

3. What are the only factors of a prime number?

- A. 0 and itself B. 1 and 0
C. 1 and itself D. 2 and itself (C)

Explanation: Prime numbers have exactly two factors: 1 and the number itself.

4. What is the prime factorisation of 56?

- A. $2 \times 2 \times 14$ B. $2 \times 2 \times 2 \times 7$
C. 4×14 D. 7×8 (B)

Explanation: $56 = 2 \times 2 \times 2 \times 7$ is its prime factorisation.

5. What is the only even prime number?

- A. 0 B. 4
C. 2 D. 6 (C)

Explanation: 2 is the only even number that has exactly two factors.

6. Which of the following pairs is co-prime?

- A. 20 and 30 B. 12 and 18
C. 4 and 9 D. 14 and 28 (C)

Explanation: 4 and 9 have no common factor other than 1.

7. Which number has exactly three distinct prime factors?

- A. 45 B. 60
C. 91 D. 105 (D)

Explanation: $105 = 3 \times 5 \times 7$ – three distinct prime factors.

8. Which number is not divisible by 10?

- A. 8560 B. 60
C. 125 D. 1000 (C)

Explanation: 125 does not end with 0, so it's not divisible by 10.

9. What is the rule for checking divisibility by 4?

- A. Last digit is 0
B. Last two digits form a number divisible by 4
C. Sum of digits is divisible by 4
D. Number ends in 4 (B)

Explanation: If the number formed by last two digits is divisible by 4, then the number is divisible by 4.

10. What is the smallest perfect number mentioned in the chapter?

- A. 6 B. 10
C. 28 D. 12 (C)

Explanation: 28 has factors 1, 2, 4, 7, 14, and 28. Their sum is $56 = 2 \times 28$.