

## CHAPTER-5 | Prime Time

QUIZ  
PART-09

1. Co-prime numbers are two numbers that have:

- A. the same factors
- B. no common factor other than 1
- C. only even factors
- D. only prime factors (B)

**Explanation:** Co-prime numbers have exactly one common factor, and that is 1.

2. In the treasure game, a pair is called safe when:

- A. jump size 1 is allowed
- B. both numbers are even
- C. no jump size other than 1 can reach both
- D. both numbers are prime (C)

**Explanation:** Since jump size 1 is not allowed, a pair is safe when the two numbers have no common factor other than 1.

3. Which of the following is a co-prime pair?

- A. 15 and 39
- B. 4 and 15
- C. 20 and 55
- D. 18 and 36 (B)

**Explanation:** Factors of 4 are 1, 2, 4 and factors of 15 are 1, 3, 5, 15. Their only common factor is 1.

4. Why are 15 and 39 not co-prime?

- A. Both are odd
- B. Both are composite
- C. They have 3 as a common factor
- D. They have 5 as a common factor (C)

**Explanation:** 15 and 39 are both divisible by 3, so they are not co-prime.

5. Are 18 and 29 co-prime?

- A. Yes
- B. No
- C. Cannot say
- D. Only if 1 is not counted (A)

**Explanation:** 29 is prime, and it does not share any common factor with 18 except 1.

6. Are 20 and 55 co-prime?

- A. Yes
- B. No
- C. Only sometimes
- D. Cannot say (B)

**Explanation:** Both numbers are divisible by 5, so they are not co-prime.

7. Which pair has first common multiple equal to the product of the two numbers?

- A. 4 and 6
- B. 6 and 8
- C. 4 and 15
- D. 10 and 15 (C)

**Explanation:** For co-prime numbers, the first common multiple is their product. Since 4 and 15 are co-prime, their first common multiple is  $4 \times 15 = 60$ .

8. Which pair has first common multiple less than the product of the two numbers?

- A. 4 and 15
- B. 18 and 29
- C. 15 and 37
- D. 20 and 55 (D)

**Explanation:** 20 and 55 are not co-prime because they share 5, so their LCM is less than  $20 \times 55$ .

9. Are 18 and 35 co-prime?

- A. Yes
- B. No
- C. Only if 35 is prime
- D. Only if 18 is prime (A)

**Explanation:** 18 has factors 1, 2, 3, 6, 9, 18 and 35 has factors 1, 5, 7, 35. Their only common factor is 1.

10. Are 15 and 37 co-prime?

- A. No, because 37 is prime
- B. Yes
- C. No, because 15 is composite
- D. No, because both are odd (B)

**Explanation:** 37 shares no common factor with 15 except 1, so they are co-prime.