1. What is the main use of prime factorization shown in this part?
   A. Drawing graphs
   B. Co-primeness check and divisibility tests
   C. Measuring length
   D. Finding area (B)

Explanation : This part explains how prime factorization helps check whether numbers are co-prime and whether one number is divisible by another.

2. Are 56 and 63 co-prime?
   A. Yes B. No
   C. Only sometimes D. Cannot say (B)

Explanation: 56 = 2 × 2 × 2 × 7 and 63 = 3 × 3 × 7. They share 7, so they are not co-prime.

3. Are 40 and 231 co-prime?
   A. Yes
   B. No
   C. Only if 231 is prime
   D. Only if 40 is odd (A)

Explanation: 40 = 2 × 2 × 2 × 5 and 231 = 3 × 7 × 11. They have no common prime factor, so they are co-prime.

4. Are 242 and 195 co-prime?
   A. Yes B. No
   C. Only if 242 is prime D. Cannot say (A)

Explanation: 242 = 2 × 11 × 11 and 195 = 3 × 5 × 13. They have no common factor other than 1.

5. Why is 168 divisible by 12?
   A. 168 is even
   B. 12 is smaller than 168
   C. Prime factors of 12 are included in prime factors of 168
   D. 168 ends in 8 (C)

Explanation : 168 = 2 × 2 × 2 × 3 × 7 and 12 = 2 × 2 × 3. All prime factors of 12 are present in 168.

6. Is 75 divisible by 21?
   A. Yes
   B. No
   C. Only by remainder
   D. Cannot say (B)

Explanation : 75 = 3 × 5 × 5 and 21 = 3 × 7. Since 7 is not a factor of 75, 75 is not divisible by 21.

7. Is 42 divisible by 12?
   A. Yes
   B. No
   C. Only by 6
   D. Only by 3 (B)

Explanation : 42 = 2 × 3 × 7 but 12 = 2 × 2 × 3. One extra 2 is missing in 42.

8. Is 112 divisible by 12?
   A. Yes
   B. No
   C. Only by 4
   D. Only by 6 (B)

Explanation : 112 = 2 × 2 × 2 × 2 × 7 and 12 = 2 × 2 × 3. Since 3 is missing in 112, it is not divisible by 12.

9. Are 15 and 115 co-prime?
   A. Yes B. No
   C. Only if 115 is prime D. Cannot say (B)

Explanation : 15 = 3 × 5 and 115 = 5 × 23. They share 5, so they are not co-prime.

10. Which pair is co-prime?
    A. 56 and 63
    B. 15 and 115
    C. 40 and 231
    D. 75 and 21 (C)

Explanation : 40 and 231 have no common factor other than 1, so they are co-prime.