Finding LCM by Prime Factorisation

A. Choose the correct answer:

1. What is the LCM of 6 and 8 using prime factorisation?

a) 12 b) 24

c) 16 d) 18

2. What are the prime factors of 12?

a) 2 × 6 b) 3 × 4

c) 2 × 2 × 3 d) 2 × 3 × 3

3. LCM of 10 and 15 is

a) 20 b) 30

c) 25 d) 15

4. Which of the following is the correct LCM of 5 and 7?

a) 12 b) 35

c) 30 d) 25

5. Prime factorisation of 18 is

a) 2 × 9 b) 2 × 3 × 3

c) 3 × 6 d) 3 × 3 × 3

B. Write the Missing Terms to Complete the Sentences:

1. Prime factorisation of 20 is ___ × ___ × ___
2. LCM is the ___ common multiple of two numbers
3. LCM of 4 and 6 using prime factorisation is ___
4. Prime factors of 16 are ___ × ___ × ___ × ___
5. LCM of 2 and 5 is ___

C. Mark each sentence with a True (✔) or False (✗):

1. LCM is the greatest multiple of given numbers _____
2. LCM of 2 and 3 is 6 _____
3. 2 × 2 × 2 is the prime factorisation of 8 _____

4. LCM of 3 and 9 is 9 _____

5. To find LCM, we take the highest powers of all prime factors _____

D. Figure out the answers to these questions:

1. Find the LCM of 12 and 18 using prime factorization.
2. Prime factories 8 and 14 and find their LCM.
3. Find the LCM of 9 and 15 by writing their prime factors.
4. Use prime factorisation to find the LCM of 10 and 12.
5. Write prime factorisation of 6 and 20 and find their LCM.

E. Challenge yourself with these questions:

1. Write prime factorisation of 24 and 30 and find their LCM.
2. Find the LCM of 5 and 20 using prime factor method.
3. What is the LCM of 7 and 9?
4. Use prime factorisation to find LCM of 11 and 22.
5. Find the LCM of 6 and 16 using prime factorization.