

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) $2 \times 2 \times 3$
- d) $2 \times 3 \times 3$

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

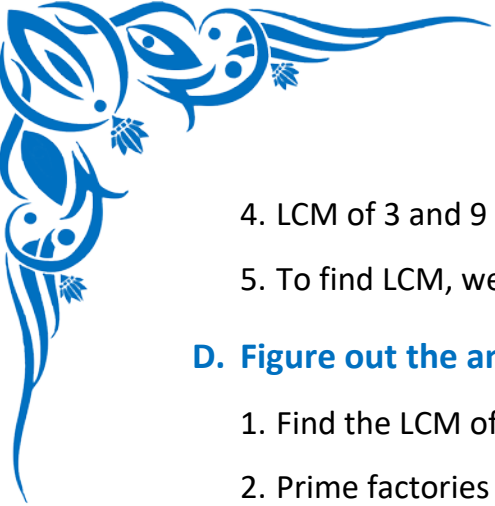
- a) 2×9
- b) $2 \times 3 \times 3$
- c) 3×6
- d) $3 \times 3 \times 3$

B. Write the Missing Terms to Complete the Sentences:

1. Prime factorisation of 20 is $___ \times ___ \times ___$
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 $___ \times ___ \times ___ \times ___$
5. LCM of 2 and 5 is $___$

C. Mark each sentence with a True (✓) or False (X):

1. LCM is the greatest multiple of given numbers _____
2. LCM of 2 and 3 is 6 _____
3. $2 \times 2 \times 2$ 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.