MONTH : AUGUST

SESSION : 5

CLASS : V

SUBJECT : MATHEMATICS

CHAPTER NUMBER: 8

CHAPTER NAME : FACTORS AND MULTIPLES

SUB-TOPIC : LEAST COMMON MULTIPLE: L.C.M. BY PRIME FACTOR METHOD. EXERCISE 8 C Q.NO.1

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LEARNING OBJECTIVE :

Enable the students

- **To Understand the concept of Multiples and Least common multiple.**
- **To find out common multiples and L.C.M.**

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L.C.M. BY PRIME FACTOR METHOD

Example 1: Find the L.C.M. of 12, 15 and 24

Prime factors of 12 = 2 × 2 × 3

Prime factors of 24 = 2 × 2 × 2 × 3

Prime factors of 15 = 3 × 5

Common Prime factors are: 3

Remaining common prime factor: 2 , 2

Uncommon prime factor : 2 and 5

L.C.M. = 3 × 2 × 2 × 2× 5 = 120

The L.C.M. of 12, 15 and 24 is 120.

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L.C.M. by Prime factor method

Example 2: Find the L.C.M. of 20, 30 and 35

Prime factors of 30 = 3 × 5 × 2

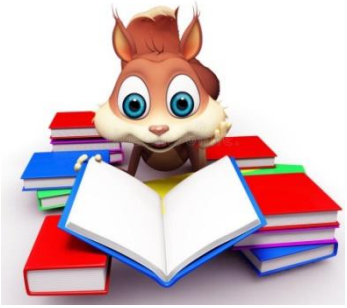
Prime factors of 20 = 2 × 5 × 2

Prime factors of 35 = 7 × 5

Common Prime factors are: 5

Remaining common prime factor: 2

Uncommon prime factor : 3,2,7



L.C.M. = 5 × 2 × 3 × 2 × 7 = 420

The L.C.M. of 20, 30 and 35 is 420.

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EXERCISE 8 [C]

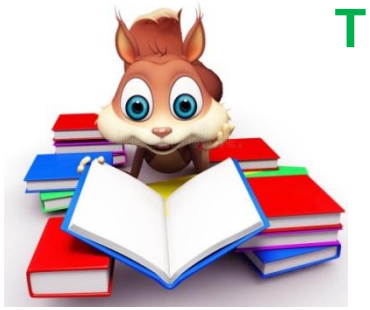
1. Write the prime factors of each number and find the L.C.M.

a. 36 and 63

Prime factors of 36 = 2 × 2 × 3 × 3

Prime factors of 63 = 7 × 3 × 3

L.C.M. = 3 × 3 × 2 × 2 × 7 = 252



The L.C.M. of 36 and 63 is 252.

EXERCISE 8 [C]

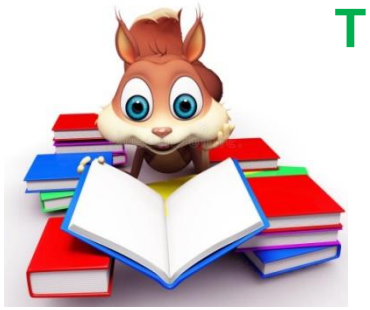
1. Write the prime factors of each number and find the L.C.M.

b. 11 and 55

Prime factors of 11 = 1 × 11

Prime factors of 55 = 5 × 11

L.C.M. = 11 × 5 ×1 = 55



The L.C.M. of 11 and 55 is 55.

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EXERCISE 8 [C]

1. Write the prime factors of each number and find the L.C.M.

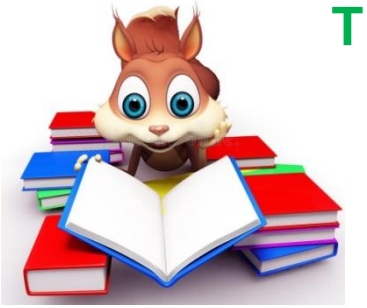
c. 25 and 100

Prime factors of 25 = 5 × 5

Prime factors of 100 = 5 × 5 × 2× 2

L.C.M. = 5× 5 × 2 ×2 = 100

The L.C.M. of 25 and 100 is 100.



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EXERCISE 8 [C]

1. Write the prime factors of each number and find the L.C.M.

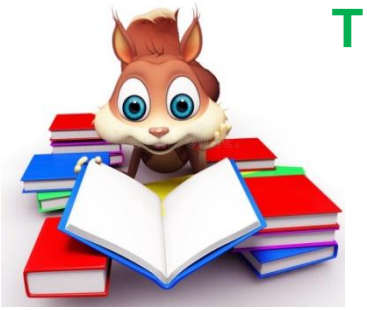
d. 9, 36 and 45

Prime factors of 9 = 3 × 3

Prime factors of 36 = 3 × 3 × 2 × 2

Prime factors of 45 = 3 × 3 × 5

L.C.M. = 3 × 3 × 2 × 2 × 5 = 180



The L.C.M. of 9, 36 and 45 is 180.

EXERCISE 8 [C]

1. Write the prime factors of each number and find the L.C.M.

e.12, 15, 18 and 36

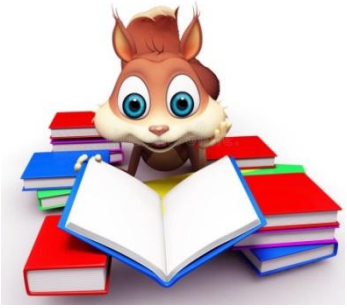
Prime factors of 12 = 3 × 2 × 2

Prime factors of 15 = 3 × 5

Prime factors of 18 = 3 × 3 × 2

Prime factors of 36 = 3 × 3 × 2 × 2

L.C.M. = 3 × 3 × 2 × 2 × 5 = 180



The L.C.M. of 12, 15, 18 and 36 180.

EXERCISE 8 [C]

1. Write the prime factors of each number and find the L.C.M.

f. 20, 50 , 60 and 100

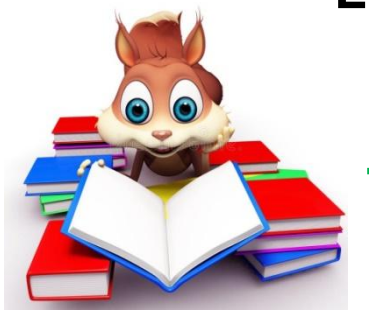
Prime factors of 20 = 2 × 2 × 5

Prime factors of 50 = 2 × 5 ×5

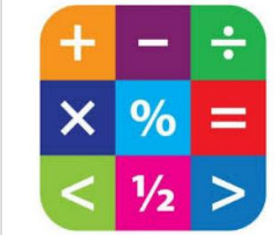
Prime factors of 60 = 2 × 2 × 5 × 3

Prime factors of 100 = 2 × 2 ×5 × 5

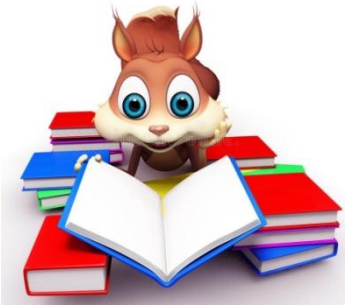
L.C.M. = 2 × 5 × 2 × 5 × 3 = 300



The L.C.M. of 20, 50, 60 and 100 is 300.



- **HOME ASSIGHMENT : Complete Exercise 8 C Q.No. 1 [g] and [h] in the notebook.**



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