CLASS : 5

SUBJECT : MATHEMATICS

TOPIC : MULTIPLES AND FACTORS

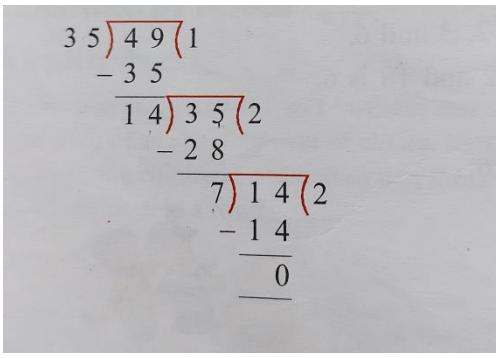
WORKSHEET

SYNOPSIS:

- The Highest Common Factor (HCF) of two or more numbers is the greatest number that is a factor of the given numbers.
- The HCF of given numbers cannot be greater than the numbers themselves.
- If one number is a factor of another number, the smaller number is the HCF of the two numbers. ***For example, in case of 9 and 27, 9 is a factor of 27. So, the HCF of 9 and 27 is 9.***
- If the HCF of two numbers is 1, they are called ***coprime numbers***. ***For example, the HCF of 16 and 25 is 1. So, 16 and 25 are coprime numbers or coprimes.***
- Consecutive numbers are always coprime. ***For example, 4 and 5 are coprime numbers and so are 9 and 10.***
- We can find the HCF of numbers by the long division method.
- The Lowest Common Multiple (LCM) of two or more numbers is the smallest multiple among all their multiples that can be divided by those numbers without leaving a remainder.
- The LCM of two or more numbers is the smallest number that is completely divisible by each of the numbers. ***For example, the LCM of 8 and 6 is 24. 24 is completely divisible by 8 and 6.***
- The LCM of two or more numbers cannot be less than the numbers themselves.
- If one number is a factor of the other, the greater number is the LCM. ***For example, in the case of 9 and 27, 9 is a factor of 27. So, the LCM of 9 and 27 is 27.***
- The LCM of coprime numbers is their product. ***For example, the LCM of 4 and 7 is 28.***

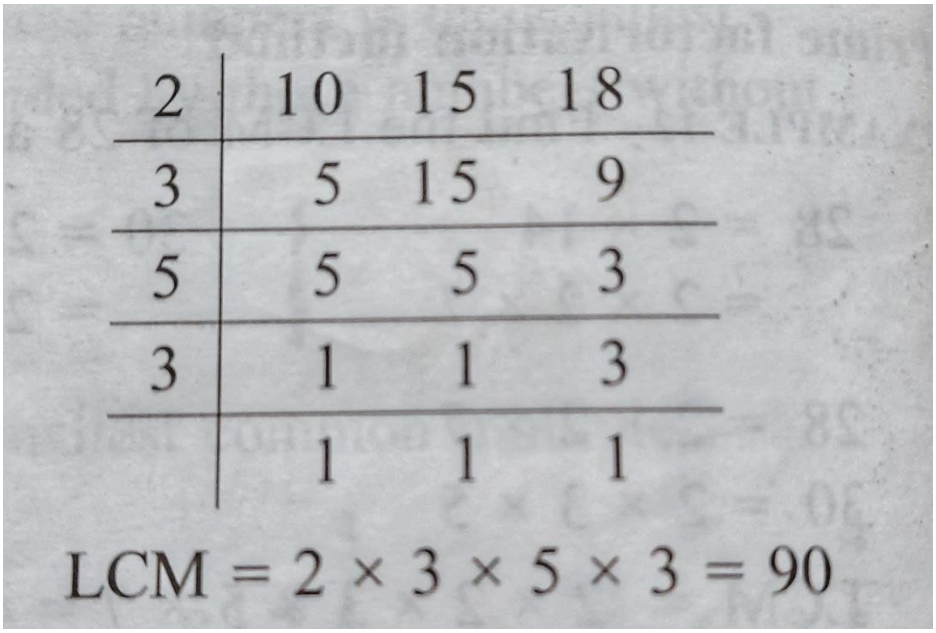
EXAMPLES:

1. Find the HCF of 35 and 49 by long division method.



Ans. The HCF of 35 and 49 is 7.

2. Find the LCM of 10, 15 and 18 by short division method.



Ans. The LCM of 10, 15 and 18 is 90.

<u>Children kindly refer to the following video links for better understanding:</u>

a) https://www.youtube.com/watch?v=T2UsR93F8f4&t=1s
b) https://www.youtube.com/watch?v=efd9bYQNDYo&t=72s

WORKSHEET:

I. Find the HCF of the following numbers using the long division method:

a) 18,30.
b) 75,180.
c) 88,168.
d) 15,24.
e) 504,576.
f) 576,784.

II. Find the LCM of the following numbers using the short division method:

a) 16,20.
b) 42,70.
c) 25,50,70.
d) 120,160.
e) 45,95,105.
f) 75,90,210.

III. Complete the following exercises at the end of the chapter:

a) Exercise 3.2 B (Sum nos. 2, 4, 6, 9 and 10) on Page No. 51 *using long division method*.
b) Exercise 3.3 B (Sum nos. 6 to 12) on Page No. 55 *using the short division method.*
