

Prepared by Ariful Haque

Lecture Sheet-1 (13/05/2020)

Class Four

Subject Mathematics

Chapter 7

Topic Multiples

Multiples:

Products of Times/Multiplication Table of a number are the multiples of the number. Such as the Times Table of 3 is...

$$3 \times 1 = 3$$

$$3 \times 2 = 6$$

$$3 \times 3 = 9$$

$$3 \times 4 = 12$$

$$3 \times 5 = 15$$

$$3 \times 6 = 18$$

$$3 \times 7 = 21$$

$$3 \times 8 = 24$$

$$3 \times 9 = 27$$

$$3 \times 10 = 30$$

.....

.....

$$3 \times 100 = 300$$

.....

.....

Therefore,

The multiples of 3:

3, 6, 9, 12, 15, 18, 21, 24, 27, 30,....., 300,.....

Similarly,

Multiples of 4:

4, 8, 12, 16, 20, 24, 28, 32, 36, 40,....., 400,.....

[dot dot means continuously multiples will be found by multiplying the desired number with any number]

Multiples of 7:

7, 14, 21, 28, 35, 42, 49, 56, 63, 70,....., 700,....

[Multiples of a number start from the number itself that means they are greater than or equal to the number itself, they are unlimited and divisible by the number itself]

Finding Common Multiples (CM) and Least Common Multiple (LCM):

Multiples of 6:

6, 12, 18, 24, 30, 36, 42,

Multiples of 12:

12, 24, 36, 48, 60,

Underlined multiples are the multiples of both 6 and 12.

So they (12, 24, 36,....) are the common multiples (CM) of 6 and 12.

And 12 is the Least (Smallest) of them. So the Least Common Multiple (LCM) is 12.

[1) To find common multiples you have to count minimum two number's multiples. Common multiples are also unlimited.

2) Remember that Least means Smallest, Lowest, Fewest, Minimum, Shortest.]

Application of LCM in word problems:

After reading the word problem,

Question(1): Can you understand how you will solve the problem?

Answer(1): By applying LCM and HCF method.

Question(2): When will you apply LCM method?

Answer(2): You will apply LCM method when you will understand that the result will be greater than the numbers used in the method from the problem.

Trick:

**If you see the following words in the word problem, you will apply LCM method.*

(Least, Lowest, smallest, fewest, shortest, minimum, together)

Answer to the Question no. 8: Textbook page 86

We can find out the time by finding LCM of 8 and 6.

Multiples of 8:

8, 16, 24, 32, 40,....

Multiples of 6:

6, 12, 18, 24, 30,....

Therefore the LCM of 8 and 6 is 24.

So, 24 minutes after noon (12:00 pm) the bells will ring together.

That means at 12:24 pm they will ring together. (Answer)

Answer to the Question no. 10: Textbook page 86

Length of the side of the smallest square can be found by finding LCM of 5 and 7.

Multiples of 5:

5, 10, 15, 20, 25, 30, 35, 40,....

Multiples of 7:

7, 14, 21, 28, 35, 42, 49, 56,.....

Therefore the LCM is 35.

So the length of the side of the smallest square is 35 cm. (Answer)

End