

# Chapter - 8

## Factors and multiples Worksheet

classmate

Date \_\_\_\_\_

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A. Fill in the blanks.

- a) 1, 3, 5 and 15 are called factors of 15.
- b) All even numbers are divisible by 2.
- c) 1 is a number which is neither prime nor composite.
- d) 18 is a multiple of 3 and 6.
- e) Numbers that have only two factors, 1 and the number itself, are called prime numbers.

B. Match the following :

Column - A

Column - B

- |                           |                  |
|---------------------------|------------------|
| 1. Factors of 35          | i) 1 (3)         |
| 2. Multiple of 5          | ii) infinite (5) |
| 3. Factor of every number | iii) 50 (2)      |
| 4. Smallest prime number  | iv) 7 (1)        |
| 5. Factors of a number    | v) 2 (4)         |

C. Do as directed.

2) Find the H.C.F of 16, 24 and 85.

Ans-

$$\begin{array}{r}
 3 \\
 24 \overline{) 85} \\
 \underline{72} \phantom{0} \\
 13 \overline{) 24} \\
 \underline{13} \phantom{0} \\
 11 \overline{) 13} \\
 \underline{11} \phantom{0} \\
 2 \overline{) 10} \\
 \underline{10} \phantom{0} \\
 1 \overline{) 2} \\
 \underline{2} \\
 0
 \end{array}$$

$$\begin{array}{r}
 16 \\
 1 \overline{) 16} \\
 \underline{16} \\
 0
 \end{array}$$

So, the H.C.F of 16, 24 and 85 is 1.

b) Find the L.C.M of 16, 18 and 32

Ans-

$$\begin{array}{r|l}
 2 & 16, 18, 32 \\
 2 & 8, 9, 16 \\
 2 & 4, 9, 8 \\
 2 & 2, 9, 4 \\
 2 & 1, 9, 2 \\
 3 & 1, 9, 1 \\
 3 & 1, 3, 1 \\
 & 1, 1, 1
 \end{array}$$

L.C.M =  $2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 = 288$

So, the L.C.M of 16, 18 and 32 is 288.

c) The H.C.F of two numbers is 5 and L.C.M is 60. If one of the numbers is 20, find the other number

Ans-  $L.C.M \times H.C.F = \text{The other number} \times \text{One number}$

$$\text{The other number} = \frac{60 \times 5}{20} = 15 \text{ Ans.}$$

So, the answer is 15.

d) Find the greatest number which divides 90 and 405 without leaving a remainder.

Ans - The H.C.F of 90 and 405 = 45

$$\begin{array}{r} 4 \\ 90 \overline{) 405} \\ \underline{360} \quad 2 \\ 45 \overline{) 90} \\ \underline{90} \\ 0 \end{array}$$

The greatest number which divides 90 and 405 without leaving a remainder.

e) Three bells of a temple began ringing at 9 a.m. The first bell rings after every 30 minutes and the second one rings after every 45 minutes and the third one rings after every hour. At what time will they ring together again?

Ans - 1 <sup>st</sup> bell ring after every 30 minutes	2 <sup>nd</sup> bell ring after every 45 minutes	3 <sup>rd</sup> bell ring after every hour
9:00 a.m.	9:00 a.m.	9:00 a.m.
9:30 a.m.	9:45 a.m.	10:00 a.m.
10:00 a.m.	10:30 a.m.	11:00 a.m.
10:30 a.m.	11:15 a.m.	12:00 p.m.
11:00 a.m.	12:00 p.m.	
11:30 a.m.		
12:00 p.m.		

So, the three bells will ring together at 12:00 p.m.

End