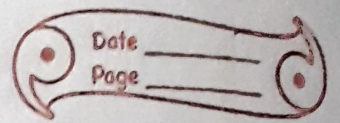


Factors and Multiples



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. Factor of 35

i) 1

2. Multiple of 5

ii) infinite

3. Factor of every number

iii) 50

4. Smallest prime number

iv) 7

5. Multiples of a number

v) 2

Ans- 1-iv, 2-iii, 3-i, 4-v, 5-ii

c. Do as directed!

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

Ans-
$$\begin{array}{r} 1 \overline{) 16, 24, 85} \\ 16, 24, 85 \end{array}$$

So, H.C.F is 1.

b) Find the L.C.M of 16, 28 and 32.

Ans- ~~C.A~~
$$\begin{array}{r} 2 \overline{) 16, 28, 32} \\ 2 \overline{) 8, 14, 16} \\ 2 \overline{) 4, 7, 8} \\ 2 \overline{) 2, 7, 4} \\ 2 \overline{) 1, 7, 2} \\ 7 \overline{) 1, 7, 1} \\ 1, 1, 1 \end{array}$$

$$= 7 \times 2 \times 2 \times 2 \times 2 \times 2$$

$$= 224$$

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- Given,

$$\begin{aligned} \text{H.C.F} &= 5 \\ \text{L.C.M} &= 60 \end{aligned}$$

$$\text{one number} = 20$$

$$\text{other number} = \frac{\text{H.C.F} \times \text{L.C.M}}{\text{one number}}$$

$$= \frac{5 \times 60}{20} = 15$$

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

Ans-

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

H.C.F of 90 and 405 = 45

Hence, 45 is 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 30 minutes and the second one rings after 45 minutes and the ~~the~~ third one rings after one hour. At what time will they ring together again?

Ans - First bell rings after = 30 minutes.
Second bell rings after = 45 minutes.
Third bell rings after = 1 hour = 60 minutes

Required time =

L.C.M of (30, 45, 60)

$$3 \overline{) 30, 45, 60}$$

$$5 \overline{) 10, 15, 20}$$

$$2 \overline{) 2, 3, 4}$$

$$2 \overline{) 1, 3, 2}$$

$$3 \overline{) 1, 3, 1}$$

$$1, 1, 1$$

$$L.C.M = 3 \times 5 \times 2 \times 2 \times 3 =$$

$$180 \text{ minutes} =$$

$$3 \text{ hours}$$

\therefore The three bells will ring together at 180 minutes or 3 hours.