

WORKSHEET

ch-8-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 ~~factor~~ 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 |
| 2. Multiple of 5 | ii) infinite |
| 3. Factor of every number | iii) 50 |
| 4. Smallest prime number | iv) 7 |
| 5. Factors of a number multiples | v) 2 |

$$\begin{array}{r}
 b) \quad 2 \overline{) 16, 28, 32} \\
 \underline{2 \overline{) 8, 14, 16}} \\
 \quad 4 \overline{) 4, 7, 8} \\
 \quad \quad 7 \overline{) 1, 7, 2} \\
 \quad \quad \quad 2 \overline{) 1, 1, 2} \\
 \quad \quad \quad \quad 1, 1, 1
 \end{array}$$

$$L.C.M. = 2 \times 2 \times 4 \times 7 \times 2 = 224$$

- c) \square H.C.F. of two numbers is 5.
 L.C.M. = 60
 one number = 20

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

$$\text{The other number is } = \frac{15 \times 1}{20 \times 1} = 15$$

The other number is 15

- d) ~~3/90~~ H.C.F. of 90 and 405

$$\begin{array}{r}
 3 \overline{) 90} \quad 5 \overline{) 405} \\
 \underline{3 \overline{) 30}} \quad \underline{3 \overline{) 81}} \\
 \quad 2 \overline{) 10} \quad \quad 3 \overline{) 27} \\
 \quad \quad 5 \overline{) 5} \quad \quad 3 \overline{) 9} \\
 \quad \quad \quad 1 \quad \quad 3 \overline{) 3} \\
 \quad \quad \quad \quad 1
 \end{array}$$

$$\begin{array}{l}
 H.C.F. = \textcircled{3} \times \textcircled{3} \times \textcircled{2} \times \textcircled{5} \\
 \quad \quad \textcircled{5} \times \textcircled{3} \times \textcircled{3} \times \textcircled{3} \times \textcircled{3} \\
 \quad \quad 3 \times 3 \times 5 = 45
 \end{array}$$

Ans

C. Three bells of a temple began ringing 9 am
The 1st bell rings after every 30 min.

The 2nd bell rings after every 45 min.

The 3rd bell rings after every 1 hr (60 min).

$$\begin{array}{r|l} \text{L-CM} = 3 & 30, 45, 60 \\ & 5, 10, 15, 20 \\ & 2, 2, 3, 4 \\ & 3, 1, 3, 2 \\ & 2, 1, 1, 2 \\ & 1, 1, 1 \end{array}$$

$$\text{L.C.M.} = 3 \times 5 \times 2 \times 3 \times 2 = 180 \text{ mins (3 hrs)} \\ \text{(12 pm)}$$

~~At~~ At 12 p.m they will ring together
again.