

Worksheet

ch-8 Factors and Multiples

SCHOLAR

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 →

(1) Factor 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) Multiples of a number v) 2 (4)

c) DO as directed →

(a) 16, 24 and 85 H.C.F

~~16, 24, 85~~

$$\begin{array}{r}
 2 \overline{)16} \\
 \underline{2 } \\
 2 \\
 \underline{2 } \\
 2 \\
 \underline{2 } \\
 0
 \end{array}
 \quad
 \begin{array}{r}
 2 \overline{)24} \\
 \underline{2 } \\
 2 \\
 \underline{2 } \\
 0
 \end{array}
 \quad
 \begin{array}{r}
 5 \overline{)85} \\
 \underline{5 } \\
 17 \\
 \underline{17} \\
 0
 \end{array}$$

$$16 = 2 \times 2 \times 2 \times 2$$

$$24 = 2 \times 2 \times 2 \times 3$$

$$85 = 5 \times 17$$

$$\text{H.C.F} = 2 \times 2 \times 2 \times 2 \times 3 \times 5 \times 17$$

$$4,080$$

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

$$\begin{array}{r}
 2 \mid 16, 28, 32 \\
 \hline
 2 \mid 8, 14, 16 \\
 \hline
 2 \mid 4, 7, 8 \\
 \hline
 2 \mid 2, 7, 4 \\
 \hline
 2 \mid 1, 7, 2 \\
 \hline
 7 \mid 1, 7, 1 \\
 \hline
 1, 1, 1
 \end{array}$$

$$\text{L.C.M} = 2 \times 2 \times 2 \times 2 \times 2 \times 7 = 224$$

(c)

Product of two no

= Product of H.C.F and L.C.M

of two number

$$= 20 \times \text{second no} = 5 \times 60 = 300$$

$$\text{second no} = 300 \div 20 = 15$$

So, the other no is 15

(d) H.C.F of 90, 405

$$\begin{array}{r}
 5 \overline{) 90, 405} \\
 3 \overline{) 18, 81} \\
 3 \overline{) 6, 27} \\
 \quad \underline{2, 9}
 \end{array}$$

H.C.F = $5 \times 3 \times 3 = 45$

(e)

Three bells of a temple began ringing at = 9 a.m

The first bell rings after = 30 mins

The second one rings after = 45 mins

The third one rings after = hour

L.C.M of 30, 45, 60

$$\begin{array}{r}
 5 \overline{) 30, 45, 60} \\
 3 \overline{) 6, 9, 12} \\
 2 \overline{) 2, 3, 4} \\
 \quad \underline{1, 3, 2} \\
 2 \overline{) 1, 3, 2} \\
 \quad \underline{1, 3, 1} \\
 3 \overline{) 1, 3, 1} \\
 \quad \underline{1, 3, 1} \\
 \quad \quad 1, 1, 1
 \end{array}$$

L.C.M = $5 \times 3 \times 2 \times 2 \times 3 = 180$ mins

$$1 \text{ hour} = 60 \text{ mins}$$

$$180 \text{ mins} \div 60 \text{ mins} = 3 \text{ hour}$$