

Mathematics Worksheet

Factors and Multiples

A. 1. 1 is a factor of everyone.

2. 2 is the first even prime number.

3. The smallest multiple of a number is the

4. 0 is a multiple of every number.

5. Prime numbers are having 2 numbers of factors.

B. 6. Every number is a multiple of

a. 0

7. Composite numbers are the numbers having more than two factors i.e. other than _____ and the number itself.

b. 1

8. Every _____ number can be expressed as a product of all its prime factors.

b. Composite

9. Composite numbers are having more than _____ factors.

a. 2

10. When a particular number is a multiple of 2 or more numbers, it is called a _____.

c. Common multiple

c. 11. Write the first five multiples of

18.

Multiples of 18 = 18, 36, 54, 72, 90

12. Find the HCF of 40, 50, and 60 by prime factorization method.

$$\begin{array}{r} 2 \overline{)40} \\ 2 \overline{)20} \\ 2 \overline{)10} \\ \underline{5} \end{array}$$

$$\begin{array}{r} 5 \overline{)50} \\ 5 \overline{)10} \\ \underline{2} \end{array}$$

$$\begin{array}{r} 3 \overline{)60} \\ 2 \overline{)20} \\ 2 \overline{)10} \\ \underline{5} \end{array}$$

Factor of 40 = $2 \times 2 \times 2 \times 5$

Factor of 50 = $5 \times 5 \times 2$

Factor of 60 = $3 \times 2 \times 2 \times 5$

$$2 \times 5 = 10$$

13. Find the LCM of 36 and 52 by listing method.

Multiples of 36 = ~~1~~, ~~2~~, 3, ~~4~~, 9, 12, 18, 36

Multiples of 52 = ~~1~~, ~~2~~, ~~4~~, 13, 26, 52, 5

$$LCM = 4$$

14. Find the LCM of 15 and 90 by common division method.

$$\begin{array}{r|l}
 3 & 15, 90 \\
 \hline
 3 & 5, 30 \\
 \hline
 5 & 5, 10 \\
 \hline
 2 & 1, 2 \\
 \hline
 & 1, 1
 \end{array}$$

$$\text{LCM} = 3 \times 3 \times 5 \times 2 = \cancel{90} \quad 90$$

15. Find the HCF of 144, 180 and 192 by common division method.

$$\begin{array}{r|l}
 2 & 144, 180, 192 \\
 \hline
 2 & 72, 90, 96 \\
 \hline
 2 & 36, 45, 48 \\
 \hline
 2 & 18, 45, 24 \\
 \hline
 2 & 9, 45, 12 \\
 \hline
 3 & 9, 45, 6 \\
 \hline
 5 & 3, 45, 2 \\
 \hline
 3 & 3, 9, 2 \\
 \hline
 & 1, 3, 2
 \end{array}$$

$192 = 2 \times 2 \times 2 \times 2 \times 2 \times 3$
 $3 \times 5 \times 3 \times 2$
 $= 2 \times 2 \times 2 \times 3$
 $= 24$
 HCF is 24