

Factors and multiples

WORKSHEET

A. FILL IN THE BLANKS.

- 1 is a factor of everyone.
- 3 is the first even prime number.
- The smallest multiple of a number is the 1.
- 1 is a multiple of every number.
- Prime numbers are having 1 numbers of factors.

B. CHOOSE THE CORRECT ANSWER.

- Every number is a multiple of _____.
 a. 0 b. 1 ✓ c. 33 d. None
- Composite numbers are the numbers having more than two factors i.e other than _____ and the number itself.
 a. 0 b. 1 ✓ c. 33 d. None
- Every _____ number can be expressed as a product of all its prime factors.
 a. Prime ✓ b. Composite c. HCF d. None
- Composite numbers are having more than _____ factors.
 a. 2 ✓ b. 1 c. 3 d. None

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

a. LCM

b. HCF

✓ c. Common multiple

d. None

C. ANSWER THE FOLLOWING QUESTIONS.

11. Write the first five multiples of 18.

18, 36, 54, 72, 90

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

$$\begin{array}{r} 2 \overline{) 40} \\ 2 \overline{) 20} \\ 2 \overline{) 10} \\ 5 \overline{) 5} \\ 1 \end{array} \quad \begin{array}{r} 2 \overline{) 50} \\ 5 \overline{) 25} \\ 5 \overline{) 5} \\ 1 \end{array} \quad \begin{array}{r} 2 \overline{) 60} \\ 2 \overline{) 30} \\ 3 \overline{) 15} \\ 5 \overline{) 5} \\ 1 \end{array}$$

$$\begin{array}{l} 40 = 2 \times 2 \times 2 \times 5 \\ 50 = 2 \times 5 \times 5 \\ 60 = 2 \times 2 \times 3 \times 5 \end{array}$$

$$\text{HCF} = 2 \times 5 = 10$$

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

36 - 36, 72, 108, 144, 180, 216, 252, 288, 324, 360.
52 - 52, 104, 156, 208, 260, 312, 364, 416, 468, 520.

52 - 52, 104, 156, 208, 260, 312, 364, 416, 468, 520.

So, there was not LCM of 36 and 52 -

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

$$\begin{array}{r} 3 \overline{) 15, 90} \\ 5 \overline{) 5, 30} \\ 2 \overline{) 1, 6} \\ 3 \overline{) 1, 3} \\ 1 \overline{) 1, 1} \end{array}$$

So, LCM of 15 and 90 = $3 \times 5 \times 2 \times 3 = 90$

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

$$\begin{array}{r} 2 \mid 144, 180, 192 \\ 2 \mid 72, 90, 96 \\ 3 \mid 36, 45, 48 \\ \quad \mid 12, 15, 16 \end{array}$$

So, HCF of 144, 180 and 192 = $2 \times 2 \times 3 = 12$

$$\begin{array}{r} 1 \mid 1, 1, 1 \\ 1 \mid 1, 1, 1 \\ \quad \mid 1, 1, 1 \end{array} \quad \text{*****}$$

LCM

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