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CLASS: V

BE MY MULTIPLE, I'LL BE YOUR FACTOR

IMPORTANT POINTS

MULTIPLE:

A multiple of a number is the product of that number and any other whole number (1,2,3,4,5,.....).

1. Write the multiples of 4

The multiples of 4 are 4 ,8,12, 16, 20,

2. Write the multiples of 9.

The multiples of 9 are 9,18,27,36,45,54,.....

3. Write the first ten multiples of 7.

The first ten multiples of 7 are 7,14,21,28,35,42,49,56,63 and 70

4. Write any ten multiples of 6.

The ten multiples of 6 are 12,18,24,30,36, 42,48,54,60,66 and 72.

5. Write the common multiples of 3 and 5.

The multiples of 3 are 3,6,9,12,15,18,21,24,30,33,36,39,42,45,.....

The multiples of 5 are 5,10,15,20,25,30,35,40,45,50,.....

The common multiples of 3 and 5 are 15,30,45,.....

6. Write the common multiples of 10 and 5.

The multiples of 10 are 10,20,30,40,50,60,.....

The multiples of 5 are 5,10,15,20,25,30,35,40,45,50,.....

The common multiples of 10 and 5 are 10,20,30,40,50,60,.....

LCM- Least Common Multiple

1. Find the LCM of 12 and 48.

The multiples of 12 are 12,24,36,48,60,72,84,96,108,120,132,144,...

The multiples of 48 are 48,96,144,192,240,296,.....

The common multiples of 12 and 48 are 48,96,144,.....

The LCM of 12 and 48 is 48.

FACTORS:

- Factors are numbers we can multiply together to get another number
- A number which can divide given number exactly is called the factor of that given number.

- Example: $2 \times 3 = 6$
2 and 3 are the factors of 6.

1. Find the factors of 8.

$$1 \times 8 = 8$$

$$2 \times 4 = 8$$

The factors of 8 are 1, 2, 4 and 8.

2. Find the factors of 48.

$$48 = 1 \times 48$$

$$48 = 2 \times 24$$

$$48 = 3 \times 16$$

$$48 = 4 \times 12$$

$$48 = 6 \times 8$$

The factors of 48 are 1, 2, 3, 4, 6, 8, 12, 16, 24 and 48.

3. Find the common factors of 12 and 16.

$$12 = 1 \times 12$$

$$16 = 1 \times 16$$

$$12 = 2 \times 6$$

$$16 = 2 \times 8$$

$$12 = 3 \times 4$$

$$16 = 4 \times 4$$

The factors of 12 are 1, 2, 3, 4, 6 and 12.

The factors of 16 are 1, 2, 4, 8 and 16.

The common factors of 12 and 16 are 1, 2 and 4.

HOME WORK

- Write the common factors of 24 and 42.
- Find the common factors of 30 and 120.

HCF- Highest Common Factor

GCD- Greatest Common Divisor

1. Find the HCF of 15 and 36.

$$15 = 1 \times 15$$

$$36 = 1 \times 36$$

$$15 = 3 \times 5$$

$$36 = 2 \times 18$$

$$36 = 3 \times 12$$

$$36 = 4 \times 9$$

$$36 = 6 \times 6$$

The factors of 15 are 1, 3, 5 and 15.

The factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18 and 36.

The common factors of 15 and 36 are 1 and 3.

The highest common factor of 15 and 36 is 3

2. Find GCD of 45 and 35.

$$45 = 1 \times 45$$

$$35 = 1 \times 35$$

$$45 = 3 \times 15$$

$$35 = 5 \times 7$$

$$45 = 9 \times 5$$

The divisors of 45 are 1, 3, 5, 9, 15 and 45.

The divisors of 35 are 1, 5, 7 and 35.

The common divisors of 45 and 35 are 1 and 5

The greatest common divisor of 45 and 35 is 5

Home work

- **Find the HCF of 24 and 92**

PRIME NUMBERS:

- A prime number is any number whose only factors are 1 and itself.
- A prime number can be divide without a remainder only by itself and 1.
- Example:
The factors of 17 are 1 and 17. So, 17 is a prime number.

NOTES:

- **0** and 1 are not prime numbers.
- **The only even prime number is 2.**

1. Write the prime numbers from 51 to 70.

53, 59, 61 and 67.

COMPOSITE NUMBERS:

The numbers which are not prime numbers are called composite numbers.

Example: 4, 6, 8, 9, 10, 12 are composite numbers.

Home work

- Write the prime and composite numbers from 1 to 50.

FACTOR TREE:

1. Draw the Factor tree for 12:

