BASIC WORKSHEET

Name: _____   Grade: IV   Branch: _____   Date:01/05/20

Subject: Mathematics

Topic: Multiples and Factors

Definitions:

*Common Factors: *Factors that are same (common) for two or more numbers are called common factors.*

 E.g.: Factor of 6 = 1, 2, 3 and 6.

   Factor of 8 = 1, 2, 4 and 8.

Therefore, common factors of 6 and 8 = 1 and 2.

Common Multiples: Multiples that are same (common) for two or more numbers are called common multiples.*

E.g.:

Multiples of 3:
0, 3, 6, 9, 12, 15, 18, 21, 24 ...

Multiples of 4:
0, 4, 8, 12, 16, 20, 24, 28 ...

 Coomon multiples of 3 and 4 = 0,12,24……..

NOTE: *A number can have an infinite number of multiples. Therefore, any two numbers or set of numbers can have the infinite number of common multiples.*

* Co-prime numbers: When two numbers have no common factors other than 1.

   E.g.: 21 and 22 are coprime:

   • The factors of 21 are 1, 3, 7 and 21

   • The factors of 22 are 1, 2, 11 and 22

   (the only common factor is 1).

*Twin prime numbers: Twin primes are the pair of primes which differ by two.

E.g.: {3,5}, {5,7}, {11,13} {17,19},........etc.

*Perfect number: A number is equal to sum of its factors (excluding itself)

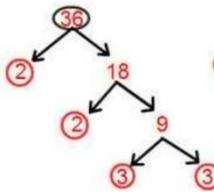E.g.: 6 factors = 1,2,3 and 6 (exclude 6)

6 = 1+2+3

6 = 6

So, 6 is a perfect number.

*Prime Factorization:

- Factor tree method:

E.g.:

36 = 2× 2 ×3 ×3

-Division method :

E.g.:

2	36
2	18
3	9
3	3
	1

36= 2 ×2 ×3 × 3

WORKSHEET

I.Find the common factors of the following :

a)56 , 64

b)15, 35

c)30 , 50

II.Find the first three common multiples of the following numbers :

a)2 , 10

b)6 , 8

c)9 , 3

III. Choose the correct answer:

a) Identify a perfect number from the given numbers ?

   (i) 28   (ii) 26   (iii) 43   (iv) 16

b) Identify a pair of coprime numbers?

   (i) 2 and 3   (ii) 14 and 21   (iii) 7 and 14   (iv)17 and 19

IV. Find the prime factors of the following numbers using division method and factor tree method

a)24

b)45