STEPPING STONE
SCHOOL (HIGH)

CLASS: V

Subject: Mathematics **Date:19/06/2020**

Topic: Chapter 4(Multiples and Factors) **Time Limit: 30 Mins**

Worksheet No. 21

[Copy the questions following the notes and solve them on a sheet of paper datewise. Keep the worksheets ready in a file to be submitted on the opening day]

Good Morning children !! Hope all of you are hale and hearty.

So, today let us learn about Highest Common Factor (HCF) by prime factorization method.

Instruction:- Please open the video link given below so that you can understand the topic on HCF by prime factorization method easily.

https://youtu.be/_PAAAUj0SEE

Now let us see some examples:-

Example1:- Let us take two numbers, 576 and 1296, Now let us find the prime factors of each number.

Prime factors of 576 = 3× 3 × 2× 2× 2× 2× 2× 2

Prime factors of 1296= 3×3 ×3× 3× 2× 2× 2× 2

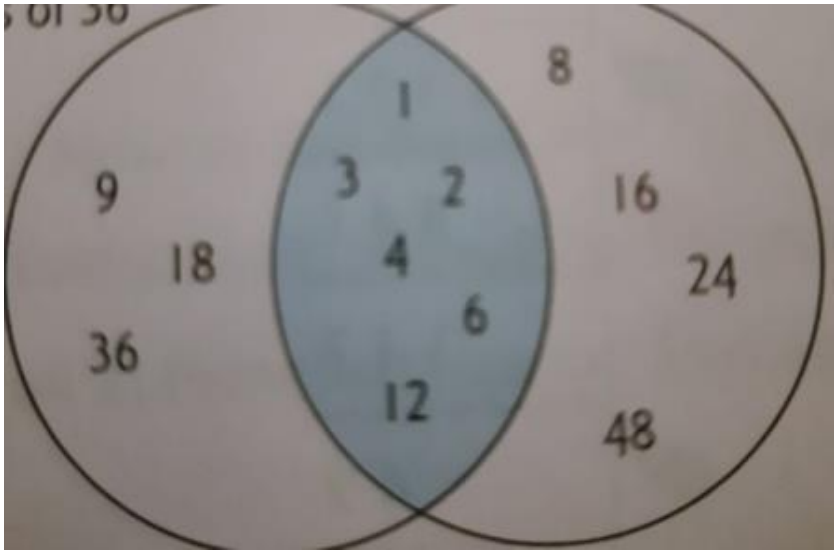
The highlighted factors (3,3,2,2,2,2)are the common factors of two numbers

Therefore, H.C.F is the product of the common factors= 3×3×2×2×2×2 = 144 or 144 divides both 576 and 1296 completely without leaving any remainder.

Example2:- Find the HCF of 36 and 48

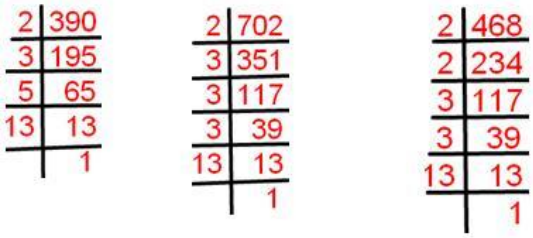
Factors of 36= 1,2,3,4,6,9,12,18 and 36

Factors of 48= 1,2,3,4,6,8,12,16,24,48



The common factors are 1,2,3,4,6 and 12. The greatest common factor is 12. Thus the HCF of 36 and 48 are 12

Example 3:- Find the HCF of 390, 702 and 468



390= 2×3×5×13×1

702= 2×3×3×3×13×1

468=2×2×3×3×13×1

Therefore, the common factors are 2,3,13

And HCF = 2×3× 13 = 78

Now let us try to solve the following exercise

Q1) Find the HCF of the following by the prime factorisation method.

a. 5184 and 2025
b. 5184 and 8000

c. 8064 and 4410
d. 1155 and 1365
e. 3885 and 4070
f. 17472 and 23296
g. 1815, 1936 and 2057
h. 3234, 3696 and 4158
i. 2835, 4480 and 4375
j. 99840, 47385 and 66885

Q2)What are the prime factors of the following numbers?

a. 1225
b. 5184
c. 10816
d. 28917
e. 81432

Children that's all for today, have a great day !