



STEPPING STONE
SCHOOL (HIGH)

CLASS: V

Subject: Mathematics

Date: 30 /06/2020

Topic: Chapter 4(Multiples and Factors)

Time Limit: 40 Mins

Worksheet No. 23

[Please read the chapter from your text book and the attached notes. Then work out the exercises neatly in your notebooks henceforth. Make a Contents page first with columns under the heads; date, worksheet no , chapter no , chapter name and teacher's signature. Ensure neat and tidy work. Follow the pattern given below]

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DATE	WORKSHEET NO.	CHAPTER NO. AND NAME	PAGE NOS.	TEACHER'S SIGNATURE

Good day children !! We are back again with another set of exercise on HCF

Instruction:- Please go through the video link given below for better understanding of the exercise.(children while going through the video link please skip the LCM part as of now and focus only on HCF story problems)

<https://youtu.be/KgZ-GbtCLu0>

In our previous class we tried to solve some HCF by long division method. So, today let us try to solve some word problems on HCF with the help of these following examples

Example- 1:- Find the greatest number that divides 2733, 5619 and 6087 leaving a remainder of 3 in each case,

We know, **Divisor \times Quotient + Remainder = Dividend**

Therefore, **Divisor \times Quotient = Dividend - Remainder**

So, if we subtract the remainder from the dividends we have,

$$2733 - 3 = 2730$$

$$5619 - 3 = 5616$$

$6087 - 3 = 6084$ (Now the resultant dividends 2730, 5616 and 6084 will be exactly divisible by their HCF)

The image shows three handwritten long division tables. The first table for 2730 shows factors 2, 3, 5, 7, and 13. The second table for 5616 shows factors 2, 3, and 13. The third table for 6084 shows factors 2, 3, and 13. The common factors 2, 3, and 13 are highlighted in yellow, pink, and blue respectively.

2	2730
3	1365
5	455
7	91
13	13
	1

2	5616
2	2808
2	1404
2	702
3	351
3	117
3	39
13	13
	1

2	6084
2	3042
3	1521
3	507
13	169
13	13
	1

Now let us multiply the highlighted common factors to get the HCF

$$\text{HCF of } 2730, 5616 \text{ and } 6084 = 2 \times 3 \times 13 = 78$$

Thus 78 is the highest number which divides 2733, 5619 and 6087 leaving a remainder of 3 in each case.

Example-2:- Find the greatest number that divides 665, 798 and 931 leaving remainders 5, 6 and 7 respectively.

Now just like our first example let us subtract the remainders from their respective dividends

$$665 - 5 = 660$$

$$798 - 6 = 792$$

$$931 - 7 = 924$$

The resultant dividends will be exactly divisible by their HCF

The image shows three handwritten prime factorization trees. The first tree for 660 starts with 2, then 330, 165, 55, 11, and finally 1. The second tree for 792 starts with 2, then 396, 198, 99, 33, 11, and finally 1. The third tree for 924 starts with 2, then 462, 231, 77, 11, and finally 1. Each step is marked with a colored sticker indicating the divisor used.

2	660
2	330
3	165
5	55
11	11
	1

2	792
2	396
2	198
3	99
3	33
11	11
	1

2	924
2	462
3	231
7	77
11	11
	1

$$\text{HCF of } 660, 792 \text{ and } 924 = 2 \times 2 \times 3 \times 11 = 132$$

Thus 132 is the greatest number which divides 665, 798 and 931 leaving remainders of 5, 6 and 7 respectively.

Exercise 4.2(page no 58)

Children by following the above examples let us try to solve these problems sums

Q4. What is the greatest number that divides 720 and 810 without leaving any remainder.

(Hint: find the HCF either by prime factorization method or by long division method)

Q5) Find the greatest number that divides 3465 as well as 3080 leaving no remainder

(Hint: find the HCF either by prime factorization method or by long division method)

Q6) What is the greatest number that divides 884, 1156 and 918 without leaving any remainder?

(Hint: use the same method as Q1) and Q2)

Q7) What is the greatest number that divides 1162, 1452 and 1742 leaving 2 as remainder in each case? (Hint: Follow the method shown in example 1)

Q8) Find the greatest number that divides 1560, 1906 and 2771 leaving 3 as remainder in each case. (Hint: Follow the method shown in example 1)

Q9) Find the greatest number that divides 25922, 32808 and 10130 leaving remainders 2, 3 and 5 respectively. (Hint: Follow the method shown in example 2)

Q10) Find the greatest number that divides 1492, 1865 and 2610 leaving remainders 4, 5 and 6 respectively. (Hint: Follow the method shown in example 2)

Remember to fill up the Contents page of your notebook every day.

That's all for today children, Take care !!