



MONTH : AUGUST

SESSION : 3

CLASS : V

SUBJECT : MATHEMATICS

CHAPTER NUMBER: 8

CHAPTER NAME : FACTORS AND MULTIPLES

SUB-TOPIC : HCF: DIVISION METHOD

EXERCISE : 8[B] Q.NO. 7

CHANGING YOUR TOMORROW

LEARNING OBJECTIVE :

Enable the students

- **To understand the concept of factors and prime factors.**
- **To understand to find out common factors and highest common factor using Division method.**

HIGHEST COMMON FACTOR

Whenever we are asked to find out the H.C.F. of large numbers we always use the division method.

Example : Find the H.C.F of 300 and 888

$$\begin{array}{r} 2 \\ 300 \overline{) 888} \\ \underline{600} \quad 1 \\ 288 \quad 300 \\ \underline{288} \quad 24 \\ 12 \quad 288 \\ \underline{12} \quad 24 \\ 48 \\ \underline{48} \\ 0 \end{array}$$

H.C.F. = 12, Because **12 is the last divisor.**

Example : Find the H.C.F of 912, 1216 and 2400.

When we are asked to find out the H.C.F. of more than 2 numbers, 1st we find out the H.C.F. of the largest and second largest number.

STEP – 1

$$\begin{array}{r} 1 \\ 1216 \overline{) 2400} \\ \underline{1216} \quad 1 \\ 1184 \overline{) 1216} \\ \underline{1184} \quad 3 \quad 7 \\ 32 \overline{) 1184} \\ \underline{96} \quad \downarrow \\ 224 \\ \underline{224} \\ 0 \end{array}$$

H.C.F. of 1216 and 2400 = 32, Because **32 is the last divisor.**

STEP – 2

Then we find out the H.C.F. of 912 and 32[the 1st H.C.F.].

$$\begin{array}{r} 28 \\ 32 \overline{) 912} \\ \underline{- 64} \\ 272 \\ \underline{- 256} \\ 16 \\ \underline{16} \\ 0 \end{array}$$

H.C.F. of 912, 1216 and 2400 = 16

EXERSICE – 8 [B]



7. Find the H.C.F of the following numbers by the division method.

a. 112 and 189

$$\begin{array}{r} 1 \\ 112 \overline{) 189} \\ \underline{112} \quad 1 \\ 77 \overline{) 112} \\ \underline{77} \quad 2 \\ 35 \overline{) 77} \\ \underline{70} \quad 5 \\ 7 \overline{) 35} \\ \underline{35} \\ 0 \end{array}$$

The H.C.F = 7



EXERSICE – 8 [B]



6. Find the H.C.F of the following numbers by the division method.

b. 34, 51 and 85

$$\begin{array}{r} 1 \\ 51 \overline{) 85} \\ \underline{51} \\ 34 \\ 34 \\ \underline{34} \\ 0 \end{array}$$

$$\begin{array}{r} 2 \\ 17 \overline{) 34} \\ \underline{34} \\ 0 \end{array}$$

∴ H.C.F of 34 ,51 and 85 = 17

The H.C.F of 85 and = 17

EXERSICE – 8 [B]



6. Find the H.C.F of the following numbers by the division method.

c. 95, 152 and 190

$$\begin{array}{r} 1 \\ 152 \overline{) 190} \\ \underline{152} \quad 4 \\ 38 \overline{) 152} \\ \underline{152} \\ 0 \end{array}$$

The H.C.F of 190
and 152 = 38

$$\begin{array}{r} 2 \\ 38 \overline{) 95} \\ \underline{76} \quad 2 \\ 19 \overline{) 38} \\ \underline{38} \\ 0 \end{array}$$

- H.C.F of 95, 152 and 190 = 19

EXERSICE – 8 [B]



6. Find the H.C.F of the following numbers by the division method.

d. 650, 900 and 1000

$$\begin{array}{r} 1 \\ 900 \overline{) 1000} \\ \underline{900} \quad 9 \\ 100 \overline{) 900} \\ \underline{900} \\ 0 \end{array}$$

The H.C.F of 1000 and 900 = 100

$$\begin{array}{r} 6 \\ 100 \overline{) 650} \\ \underline{600} \quad 2 \\ 50 \overline{) 100} \\ \underline{100} \\ 0 \end{array}$$

- H.C.F of 650, 900 and 1000 = 50

EXERSICE – 8 [B]



6. Find the H.C.F of the following numbers by the division method.

e. 690, 966 and 1150

$$\begin{array}{r} 1 \\ 966 \overline{) 1150} \\ \underline{966} \quad 5 \\ 184 \overline{) 966} \\ \underline{920} \quad 4 \\ 46 \overline{) 184} \\ \underline{184} \\ 0 \end{array}$$

The H.C.F of 1150 and 966 = 46

$$\begin{array}{r} 15 \\ 46 \overline{) 690} \\ \underline{46} \downarrow \\ 230 \\ \underline{230} \\ 0 \end{array}$$

- H.C.F of 690,966 and 1150 = 46

EXERSICE – 8 [B]



6. Find the H.C.F of the following numbers by the division method.

f. 738 , 1080 and 1332

$$\begin{array}{r} 1 \\ 1080 \overline{) 1332} \\ \underline{1080} \quad 4 \\ 252 \overline{) 1080} \\ \underline{1008} \quad 3 \\ 72 \overline{) 252} \\ \underline{216} \quad 2 \\ 36 \overline{) 72} \\ \underline{72} \\ 0 \end{array}$$

The H.C.F of 1332 and 1080 = 36

$$\begin{array}{r} 2 \\ 36 \overline{) 738} \\ \underline{72} \quad 2 \\ 18 \overline{) 36} \\ \underline{36} \\ 0 \end{array}$$

- H.C.F of 738, 1080 and 1332 = 18



HOME ASSIGNMENT:

- **Complete Exercise 8 [B] Q.No. 7 (g) and (h) in the notebook.**



LEARNING OBJECTIVE :

The students are able

- **To understand the concept of factors and prime factors.**
- **to find out common factors and highest common factor using Division method.**

THANKING YOU
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