

SESSION : 12 CLASS : IV

SUBJECT : MATHEMATICS

CHAPTER NUMBER: 10

CHAPTER NAME : FACTORS AND MULTIPLES

SUBTOPIC : HCF BY PRIME FACTORIZATION

METHOD AND EXAMPLES

CHANGING YOUR TOMORROW

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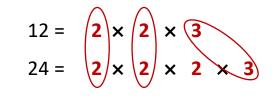
LEARNING OBJECTIVE

 Enable the students to understand how to find the HCF by using the prime factorization method.



HCF by Prime Factorization Method

Example: 1 Find the HCF of 12 and 24 by prime factorization method.









HCF by Prime Factorization Method

Example: 2 Find the HCF of 24 and 36 by prime factorization method.



$$24 = \begin{pmatrix} 2 \\ 2 \\ \times \begin{pmatrix} 2 \\ 2 \end{pmatrix} \times \begin{pmatrix} 2 \\ \times \end{pmatrix} \times \begin{pmatrix} 2 \\ \times \end{pmatrix} \times \begin{pmatrix} 3 \\ 3 \\ \end{pmatrix}$$

$$36 = \begin{pmatrix} 2 \\ 2 \\ \times \end{pmatrix} \times \begin{pmatrix} 2 \\ 2 \\ \times \end{pmatrix} \times \begin{pmatrix} 3 \\ 3 \\ \times \end{pmatrix} \times \begin{pmatrix} 3 \\ 3 \\ \times \end{pmatrix}$$

$$HCF = 2 \times 2 \times 3 = 12$$





HCF by Prime Factorization Method

Example: 3 Find the HCF of 5 and 10 by prime factorization method.

$$5 = \begin{pmatrix} 5 \\ 10 = \begin{pmatrix} 5 \\ 5 \end{pmatrix} \times 1 \\ \times 2 \end{pmatrix}$$

$$HCF = 5$$

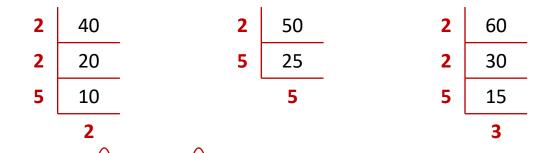


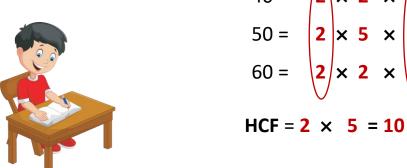


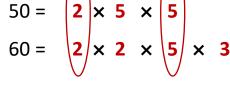


HCF by Prime Factorization Method

Example: 4 Find the HCF of 40, 50 and 60 by prime factorization method.









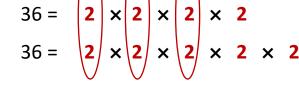


HCF by Prime Factorization Method

Example: 5 Find the HCF of 8, 16 and 32 by prime factorization method.











LEARNING OUTCOME:

Students are able to understand how to find out the HCF by using the prime factorization method.



THANKING YOU ODM EDUCATIONAL GROUP

