Prime Factorisation

Write as a product of its prime factors 2, 3, 5, 7, 11, 13

Ex1 56

$$\begin{array}{r|l} 2 & 56 \\ 2 & 28 \\ 2 & 14 \\ 7 & 7 \\ & 1 \end{array}$$

$56 = 2 \times 2 \times 2 \times 7$

OR $2^3 \times 7$

Ex2 48

$$\begin{array}{r|l} 2 & 48 \\ 2 & 24 \\ 2 & 12 \\ 2 & 6 \\ 3 & 3 \\ & 1 \end{array}$$

$48 = 2 \times 2 \times 2 \times 2 \times 3$

OR $2^4 \times 3$

Find Highest Common Factor (HCF) of 56 and 48

$56 = (2) \times (2) \times (2) \times 7$

$48 = (2) \times (2) \times (2) \times 2 \times 3$

$HCF = 2 \times 2 \times 2 = 8$

Find Lowest Common Multiple (LCM) of 56 and 48

$56 = 2 \times 2 \times 2 \times 7$

$48 = 2 \times 2 \times 2 \times 2 \times 3$

LCM has all the factors of each number

$LCM = 2 \times 2 \times 2 \times 7 \times 2 \times 3 = 336$

If the LCM is asked for in a calculator exam it can be found by writing out the multiplication tables for 48 and 56, looking for the first number in both lists

48, 96, 144, 192, 240, 288 (336)

56, 112, 168, 224, 280, (336), 392

LCM = 336
