

# Prime Factors HCF LCM

2, 3, 5, 7, 11

Write 72 as product of prime factors

$$2 \overline{)72}$$

$$2 \overline{)36}$$

$$2 \overline{)18}$$

$$3 \overline{)9}$$

$$3 \overline{)3}$$

1

$$72 = 2 \times 2 \times 2 \times 3 \times 3$$

$$= 2^3 \times 3^2$$

Write 54 as a product of prime factors

$$2 \overline{)54}$$

$$3 \overline{)27}$$

$$3 \overline{)9}$$

$$3 \overline{)3}$$

1

$$54 = 2 \times 3 \times 3 \times 3$$

$$= 2 \times 3^3$$

Find HCF of 54 and 72

$$54 = 2 \times 3 \times 3 \times 3$$

$$72 = 2 \times 2 \times 2 \times 3 \times 3$$

$$\text{HCF} = 2 \times 3 \times 3 = 18$$

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Find LCM of 54 and 72

$$\begin{aligned}
 &= \overbrace{2 \times 2 \times 2 \times 3 \times 3}^{\text{Factor of 72}} \times \overbrace{3}^{\text{Extra factor for 54}} \times 3 \\
 &= \underline{216}
 \end{aligned}$$

$$\begin{array}{r}
 72 \\
 \underline{3} \times \\
 216
 \end{array}$$

In calculator exam to find LCM you could write out multiplication tables

54    108    162    216    270

72    144    216

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