

PRIME FACTORIZATION

LCM 48 and 36

$$\begin{array}{r} \cancel{2} \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{2} \cdot 3 \\ \cancel{2} \cdot \cancel{2} \cdot \cdot \cdot \cancel{3} \cdot \cancel{3} \\ \hline 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \end{array}$$

144

$$\begin{array}{c} 36 \\ \wedge \\ 6 \cdot 6 \\ \wedge \quad \wedge \\ 2 \cdot 3 \quad 2 \cdot 3 \end{array}$$

$$\begin{array}{c} 48 \\ \wedge \\ 2 \cdot 24 \\ \cdot \wedge \\ \cdot 12 \\ \cdot \cdot \wedge \\ \cdot \cdot 6 \\ \cdot \cdot \cdot \wedge \\ \cdot \cdot \cdot 3 \end{array}$$

GCF 48 and 36

$$\begin{array}{r} 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \\ 2 \cdot 2 \cdot 3 \cdot 3 \\ \hline 2 \cdot 2 \cdot 3 \end{array}$$

12

$$\frac{7 \times 10}{54 \times 10} + \frac{13 \times 9}{60 \times 9}$$

$$\frac{70}{540} + \frac{117}{540}$$

$$\frac{187}{540}$$

Prime factorization of 54: $54 = 2 \cdot 3 \cdot 3 \cdot 3$
 Prime factorization of 60: $60 = 2 \cdot 3 \cdot 2 \cdot 5$
 Prime factorization of 540: $540 = 2 \cdot 2 \cdot 3 \cdot 3 \cdot 3 \cdot 5$
 $540 = \text{LCD}$

+/- Fractions

S common denominators LCM \rightarrow LCD

O +/- whole #'s, +/- numerators
 (- borrow, 1 \rightarrow fraction)

S reduce, make improper \rightarrow mixed #'s
 \rightarrow GCF

x fractions

S fraction mixed #'s \rightarrow improper

O $\frac{n \times n}{d \times d}$, cross cancel if can

S reduce, make improper \rightarrow mixed #

\div fractions

S fractions, mixed \rightarrow improper

O KCF, $\frac{n \times n}{d \times d}$, cross cancel if can

S reduce, improper \rightarrow mixed #