

$$5. \frac{n^2+3n-7}{n^2+n-6} - \frac{n+1}{n^2+n-6}$$

$$6. \frac{13k^2-9k}{6k^2-5k+1} + \frac{k^2+2k}{6k^2-5k+1}$$

LCM

prime factor
 LCM
 Numeric
 6: 1, 2, 3
 8: 1, 2, 2, 2
 2 · 2 · 2 · 3 (24)

Finding a common denominator

denominator

If common factors list once, and multiply all other factors not common

7. $3d$ and $3d^2$

$$\begin{array}{r} \textcircled{3} \textcircled{d} \\ \textcircled{3} \cdot \textcircled{d} \cdot \textcircled{d} \\ \hline \textcircled{3} \textcircled{d} \textcircled{d} \quad 3d^2 \end{array}$$

$x-1$ and x^2-1x+3

Factors common
 $x-1$: $(x-1)$
 x^2-4x+3 : $(x-1)(x-3)$
 LCM $(x-1)(x-3)$

8. x^2-81 and $2x-18$

$$x^2-81: (x-9)(x+9)$$

$$2x-18: 2(x-9) \downarrow$$

LCM: $2(x-9)(x+9)$

Examples

With an uncommon denominator

Directions: Simplify.

9. $\frac{15}{2x} - \frac{16}{3x}$

10. $\frac{k^2+16}{5k-10} - \frac{4}{k-2}$