

MUST HAVE A COMMON DENOMINATOR

1. Factor numerator and denominator
2. State all restrictions
3. Determine LCD (lowest common denominator)
4. Write equivalent expressions
5. Simplify and state all restrictions

**Worked Examples**

$$\frac{1}{x} + \frac{2}{y}$$

$$\frac{n}{m} + \frac{m}{n} + n$$

$$\frac{2}{x+2} + \frac{x}{x-3}$$

**Pause the Video and try these two ... Restart to see the solution**

**Example 1:** Simplify

$$\frac{4x-1}{x+2} - \frac{x+3}{x+2} =$$

$$\frac{4}{5x} - \frac{3}{2x^2} + \frac{1}{x^3} =$$

**Pause the Video and try this ... Restart to see the solution**

$$\frac{x+3}{x^2-4} + \frac{x+1}{x+2} =$$

**Pause the Video and try this ... Restart to see the solution**

$$\frac{4}{y^2+5y+6} - \frac{5}{y^2-y-12} =$$

**Pause the Video and try this ... Restart to see the solution**

$$\frac{4x-7}{6x^2-17x+5} - \frac{3x+4}{2x^2-11x+15} =$$

**On Your Own****Simplify**

1. 
$$\frac{2x-1}{x+3} - \frac{x+5}{x+3}$$

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

3. 
$$\frac{x+1}{x^2-9} + \frac{x+2}{x+3}$$

4. 
$$\frac{3}{x^2+5x+4} - \frac{4}{x^2+2x-8}$$

