

# Adding/Subtracting Algebraic Fractions

To add/subtract two fractions, find a common denominator.

This can be achieved by multiplying the denominators and cross-multiplying the numerators:

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

However, often we should see if first if there are common factors in the denominator **to avoid multiplying unnecessarily**:

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

## Test Your Understanding

[Edexcel C3 June 2013(R) Q1]

Express

$$\frac{3x+5}{x^2+x-12} - \frac{2}{x-3}$$

as a single fraction in its simplest form.

Express the following as a single fraction, giving your answer in its simplest form.

$$\frac{10x+4}{3x^2+4x+1} - \frac{3}{x+1}$$