

## Worked example

Simplify:

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

## Your turn

Simplify:

$$\frac{3x + 5}{x^2 + x - 12} - \frac{2}{x - 3}$$
$$\frac{1}{x + 4}$$

## Worked example

Write as a single fraction:

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

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

## Your turn

Simplify:

$$\frac{4x + 5}{2} + \frac{x - 1}{3}$$
$$\frac{14x + 13}{6}$$

## Worked example

Write as a single fraction:

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

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

## Your turn

Simplify:

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

## Worked example

Write as a single fraction:

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

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

## Your turn

Simplify:

$$\frac{2}{4x + 5} + \frac{3}{x - 1}$$
$$\frac{10x + 13}{(4x + 5)(x - 1)}$$

## Worked example

Write as a single fraction:

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

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

## Your turn

Simplify:

$$\frac{4x + 5}{2} - \frac{x - 1}{3}$$
$$\frac{10x + 17}{6}$$

## Worked example

Write as a single fraction:

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

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

## Your turn

Simplify:

$$\frac{4x + 5}{2} - \frac{3}{x - 1}$$
$$\frac{4x^2 + x - 11}{2(x - 1)}$$

## Worked example

Write as a single fraction:

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

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

## Your turn

Simplify:

$$\frac{2}{4x + 5} - \frac{3}{x - 1}$$
$$\frac{-10x - 17}{(4x + 5)(x - 1)}$$

## Worked example

Write as a single fraction:

$$\frac{3}{(5x + 2)(x - 3)} - \frac{2}{x - 3}$$

## Your turn

Simplify:

$$\frac{2}{4x - 5} - \frac{3}{(x - 1)(4x - 5)}$$

$$\frac{2x - 5}{(x - 1)(4x - 5)}$$

$$\frac{4}{(2x + 1)(x - 5)} - \frac{3}{2x + 1}$$



## Worked example

Write as a single fraction:

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

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

## Your turn

Write as a single fraction:

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

$$\frac{5x + 7}{x + 2}$$

## Worked example

Write as a single fraction:

$$3 - (x - 4) \div \frac{x^2 - 16}{x - 5}$$

## Your turn

Write as a single simplified fraction:

$$5 - (x - 2) \div \frac{x^2 - 4}{x + 3}$$

$$\frac{4x - 13}{x - 2}$$

## Worked example

Write in the form  $1 + \frac{a}{x+b}$ :

$$\frac{x+3}{x-5}$$

$$\frac{x-2}{x+7}$$

## Your turn

Write in the form  $1 + \frac{a}{x+b}$ :

$$\frac{x-5}{x+2}$$

$$1 - \frac{7}{x+2}$$