

Recap 2

Algebraic Fractions

Express

$$\frac{2x^2+3x}{(2x+3)(x-2)} - \frac{6}{x^2-x-2}$$

as a single fraction in its simplest form.

(7)

$$\begin{aligned} & \frac{\cancel{x(2x+3)}}{\cancel{(2x+3)}(x-2)} - \frac{6}{(x+1)(x-2)} \\ &= \frac{x(x+1) - 6}{(x+1)(x-2)} \\ &= \frac{x^2 + x - 6}{(x+1)(x-2)} \\ &= \frac{(x+3)\cancel{(x-2)}}{(x+1)\cancel{(x-2)}} \\ &= \frac{x+3}{x+1} \end{aligned}$$