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## Rational Expressions | Past Paper Question | C3 Edexcel Jan 2012 Q7a

$$f(x) = \frac{3(x+1)}{2x^2+7x-4} - \frac{1}{x+4}, \quad x \in \mathbb{R}, x > \frac{1}{2}$$

Show  
 $f(x) = \frac{1}{2x-1}$

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

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

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

$$= \frac{\cancel{(x+4)}}{(2x-1)\cancel{(x+4)}} = \frac{1}{2x-1}$$



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