



Air maths tuition

Interact, engage and perform

## Completing The Square (2 of 3)

Express the following in the form  $a(x+b)^2+c$

$$\begin{aligned}3x^2-12x+5 &\equiv 3(x^2-4x)+5 \\ &\equiv 3[(x-2)^2-4]+5 \\ &\equiv 3(x-2)^2-12+5 \\ &\equiv 3(x-2)^2-7\end{aligned}$$

$$\begin{aligned}2x^2-x-1 &\equiv 2(x^2-\frac{1}{2}x)-1 \\ &\equiv 2[(x-\frac{1}{4})^2-\frac{1}{16}]-1 \\ &\equiv 2(x-\frac{1}{4})^2-\frac{1}{8}-1 \\ &\equiv 2(x-\frac{1}{4})^2-\frac{9}{8}\end{aligned}$$

$$\begin{aligned}2x^2+12x-3 &\equiv 2(x^2+6x)-3 \\ &\equiv 2[(x+3)^2-9]-3 \\ &\equiv 2(x+3)^2-18-3 \\ &\equiv 2(x+3)^2-21\end{aligned}$$

$$\begin{aligned}5x^2+3x-2 &\equiv 5(x^2+\frac{3}{5}x)-2 \\ &\equiv 5[(x+\frac{3}{10})^2-\frac{9}{100}]-2 \\ &\equiv 5(x+\frac{3}{10})^2-\frac{9}{20}-2 \\ &\equiv 5(x+\frac{3}{10})^2-\frac{49}{20}\end{aligned}$$

With the acknowledgement of [Exam Solutions](#).  
Find lots more revision sheets on [Air Maths Tuition](#).

[This Video](#)



Exam Solutions

maths made easy