

YOU & MATHS **Dividing polynomials** Use $q(x) = 2x + 3$ and $p(x) = 2x^2 + 3x - 5$. Find $s(x)$ and $r(x)$ such that $p(x) = s(x) \cdot q(x) + r(x)$.

In order to answer the question you need to divide $p(x) = 2x^2 + 3x - 5$ by $q(x) = 2x + 3$ as follows:

$$\begin{array}{r|l} 2x^2 + 3x - 5 & 2x + 3 \\ -2x^2 - 3x & \times \\ \hline & -5 \end{array}$$

Therefore we can conclude that

$$s(x) = x \text{ and } r(x) = -5.$$