

- 4** **(a)** Use the factor theorem to show that $(x - 3)$ is a factor of $4x^3 - 8x^2 - 11x - 3$. **[1]**
- (b)** Hence show that $4x^3 - 8x^2 - 11x - 3 = (x - 3)(ax + b)^2$, where a and b are integers to be determined. **[2]**
- (c)** Sketch the graph of $y = 4x^3 - 8x^2 - 11x - 3$ on the axes in the Printed Answer Booklet. **[2]**

4(c)

