4 A curve has equation $y = x^3 + 2x^2 - 11x - m$, where m is a positive integer. The curve crosses the x-axis at the point with coordinates $(-4, 0)$.

(a) Show that $m = 12$

(2)

(b) Factorise $x^3 + 2x^2 - 11x - 12$ completely.

(3)

The curve also crosses the x-axis at two other points.

(c) Write down the x-coordinate of each of these points.

(1)

Question 4 continued

(Total for Question 4 is 6 marks)