

26 The equation of a curve **C** is $y = (kx^2 - 2)(x + 3)$, where k is a constant.

The point **A** on **C** has x coordinate equal to -1

The tangent to **C** at **A** has gradient equal to -8

- (a) Show that the x coordinates of the stationary points on **C** satisfy the equation

$$3x^2 + 6x - 1 = 0$$

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(5)



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(b) Write $3x^2 + 6x - 1$ in the form $a(x + b)^2 + c$ where a , b and c are integers.

(3)

(c) Hence find the exact x coordinate of each of the stationary points on C
Show your working clearly.

(2)

(Total for Question 26 is 10 marks)

Turn over for Question 27



P 6 9 3 0 9 A 0 2 3 2 4