6 Given that $y = x^2\sqrt{(2x-3)}$

(a) show that $\frac{dy}{dx} = \frac{x(5x-6)}{\sqrt{(2x-3)}}$

(4)

(b) find the value of $\frac{dy}{dx}$ when $x = 2$

(1)

The curve C has equation $y = x^2\sqrt{(2x-3)}$

(c) Find an equation of the normal to C at the point on C where $x = 2$
Give your answer in the form $ax + by + c = 0$, where a, b and c are integers.

(5)

Question 6 continued

Question 6 continued

Question 6 continued

(Total for Question 6 is 10 marks)