5 Given that $y = 3x\sqrt{2x-1} \qquad x > \frac{1}{2}$

(a) show that $\frac{dy}{dx} = \frac{3(3x-1)}{\sqrt{2x-1}}$

(5)

The straight line l is the normal to the curve with equation $y = 3x\sqrt{2x-1}$ at the point on the curve where $x = 1$

(b) Find an equation, with integer coefficients, for l.

(6)

Question 5 continued

Question 5 continued

Question 5 continued

(Total for Question 5 is 11 marks)