

5 A curve is defined by the parametric equations

$$x = 4 \times 2^{-t} + 3$$

$$y = 3 \times 2^t - 5$$

5 (a) Show that $\frac{dy}{dx} = -\frac{3}{4} \times 2^{2t}$

[3 marks]

5 (b) Find the Cartesian equation of the curve in the form $xy + ax + by = c$, where a , b and c are integers.

[3 marks]