

10 The parametric equations of a curve are

$$x = 2 + 5\cos\theta \text{ and } y = 1 + 5\sin\theta, \text{ where } 0 \leq \theta \leq 2\pi.$$

(a) Determine the cartesian equation of the curve. **[3]**

(b) Hence or otherwise, find the equation of the tangent to the curve at the point $(5, -3)$, giving your answer in the form $ax + by + c = 0$, where a , b and c are integers to be determined. **[4]**