

7. (a) Sketch the curve C with polar equation

$$r = 5 + \sqrt{3}\cos\theta, \quad 0 \leq \theta < 2\pi. \quad (2)$$

- (b) Find the polar coordinates of the points where the tangents to C are parallel to the initial line $\theta=0$. Give your answers to 3 significant figures where appropriate. (6)

- (c) Using integration, find the area enclosed by the curve C , giving your answer in terms of π . (6)



