

3 (a) Show that the equation

$$5 \cos \theta - \sin \theta \tan \theta + 1 = 0$$

may be expressed in the form $a \cos^2 \theta + b \cos \theta + c = 0$, where a , b and c are constants to be found. [3]

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(b) Hence solve the equation $5 \cos \theta - \sin \theta \tan \theta + 1 = 0$ for $0 < \theta < 2\pi$. [4]

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