

- 3**      **(i)** Express the equation  $2 \cos^2 \theta = \tan^2 \theta$  as a quadratic equation in  $\cos^2 \theta$ . [2]
- (ii)** Solve the equation  $2 \cos^2 \theta = \tan^2 \theta$  for  $0 \leq \theta \leq \pi$ , giving solutions in terms of  $\pi$ . [3]