

**9 (a)** For  $\cos \theta \neq 0$ , prove that

$$\operatorname{cosec} 2\theta + \cot 2\theta = \cot \theta$$

**[4 marks]**

**9 (b)** Explain why

$$\cot \theta \neq \operatorname{cosec} 2\theta + \cot 2\theta$$

when  $\cos \theta = 0$

**[1 mark]**