

**5**

It is given that  $\sin 15^\circ = \frac{\sqrt{6} - \sqrt{2}}{4}$  and  $\cos 15^\circ = \frac{\sqrt{6} + \sqrt{2}}{4}$

Use these two expressions to show that  $\tan 15^\circ = 2 - \sqrt{3}$

Fully justify your answer.

**[4 marks]**