

3		$(1 + \tan^2 \theta) + 2 \tan \theta = 4$ $\tan^2 \theta + 2 \tan \theta - 3 = 0$ $(\tan \theta - 1)(\tan \theta + 3) = 0$ <p>When <math>\tan \theta = 1</math>, <math>\theta = 45^\circ, 225^\circ</math>  When <math>\tan \theta = -3</math>, <math>\theta = 108.4^\circ, 288.4^\circ</math></p>	<p><b>M1</b></p> <p><b>M1</b></p> <p><b>A1</b></p> <p><b>A1</b></p> <p><b>[4]</b></p>	<p><b>3.1a</b></p> <p><b>1.1a</b></p> <p><b>1.1b</b></p> <p><b>1.1b</b></p>	<p><b>DR</b></p> <p>Using appropriate trig identity</p> <p>Showing algebraic method for solving their quadratic</p> <p>Any two correct values for <math>\theta</math></p> <p>All correct values for <math>\theta</math> and no extras in the interval. Ignore values outside the required interval.</p>	<p>Must attempt to reach an equation with only one trig function eg</p> $20 \cos^4 \theta - 12 \cos^2 \theta + 1 = 0$ <p>Or <math>\sqrt{5} \sin(2\theta - 63.4^\circ) = 1</math></p>
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