(a)	Prove that $\frac{(\sin\theta + \cos\theta)^2 - 1}{\cos^2\theta} \equiv 2\tan\theta$.	[3]
(b)	Hence solve the equation $\frac{(\sin\theta + \cos\theta)^2 - 1}{2\sigma^2} = 5\tan^3\theta \text{ for } -90^\circ < \theta < 90^\circ.$	[3]
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