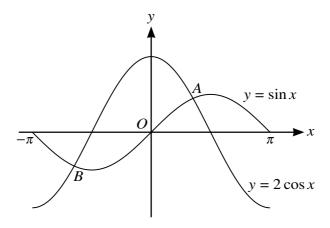
7	(a)	(i)	Express $\frac{\tan^2 \theta - 1}{\tan^2 \theta + 1}$ in the form $a \sin^2 \theta + b$ , where $a$ and $b$ are constants to be found.	[3]
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		(ii)	Hence, or otherwise, and showing all necessary working, solve the equation	
		(11)	$\frac{\tan^2 \theta - 1}{\tan^2 \theta + 1} = \frac{1}{4}$	
			for $-90^{\circ} \le \theta \le 0^{\circ}$ .	[2]

**(b)** 



The diagram shows the graphs of  $y = \sin x$  and  $y = 2\cos x$  for  $-\pi \le x \le \pi$ . The graphs intersect at the points A and B.

(i)	Find the <i>x</i> -coordinate of <i>A</i> .	[2]
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(ii)	Find the <i>y</i> -coordinate of <i>B</i> .	[2]
(ii)	Find the <i>y</i> -coordinate of <i>B</i> .	[2]
(ii)	Find the <i>y</i> -coordinate of <i>B</i> .	[2]
(ii)	Find the <i>y</i> -coordinate of <i>B</i> .	[2]
(ii)	Find the <i>y</i> -coordinate of <i>B</i> .	[2]
(ii)	Find the y-coordinate of B.	[2]
(ii)	Find the <i>y</i> -coordinate of <i>B</i> .	[2]
(ii)	Find the y-coordinate of B.	[2]