

## Topic Test 1 Mark Scheme

Further sketching graphs - Higher

Q	Answer	Mark	Comments
1(a)	$\begin{array}{c} y \\ \hline \\ 0 \\ \hline \end{array}$	B1	
1(b)	<i>y</i>	B1	
2	(0, 0), (1, 1)	B1	
3	(1, 1), (–1, –1)	B1	
4(a)	(0, 1)	B1	
4(b)	3	B1	

Q	Answer	Mark	Comments		
5(a)	Maximum value when sine = 1, so angle is 90, $30 \times 3 = 90$	B1			
5(b)	$2.7 = 4.8 \times \sin 30t + 5.1$ and- $2.4 = 4.8 \times \sin 30t$	M1			
	$\sin 30t = -0.5$	A1			
	30 <i>t</i> = 210	A1			
	7 am	A1			
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6	<i>x</i> = 90	B1			
7(a)	(-3, 12)	B1			
7(b)	<i>x</i> = 3	B1			
	(x+1)(x-3)	M1			
	$y = x^2 - 2x - 3$	A1			
8	(130, (0.766))	B2	B1 for 1 or 2 correct		
	(230, (-0.766)) (310, (-0.766))	DZ			
9	(25, (0.9))		B1 for 1 or 2 correct		
	(335, (0.9))	B2			
	(155, (–0.9))				