Topic Test 1 Mark Scheme

Pythagoras' Theorem and basic trigonometry - Higher

Q	Answer	Mark	Comments
1	$\frac{2}{\sqrt{13}}$	B1	
2	180 ÷ 40 × 2 or 9	M1	
	$\sqrt{\text{their } 9^2 + 40^2}$ or 41	M1dep	
	their 41 + their 9 + 40	M1dep	
	90	A1	
3	$\sqrt{2.5^2 - 2.2^2}$	M1	
	No and [1.18, 1.2]	A1	
4	tan A = $\frac{b}{a}$	B1	
5(a)	$AC = \sqrt{x^2 + y^2}$	M1	
	$AD^2 = x^2 + y^2 + x^2$	M1 dep	
	$\sqrt{2x^2 + y^2}$	A1	

Q	Answer	Mark	Comments
5(b)	$\frac{x}{\sqrt{x^2+y^2}} = \frac{1}{3}$	M1	
	$9x^2 = x^2 + y^2$	M1	
	$8x^2 = y^2$ $\frac{x}{y} = \frac{1}{\sqrt{8}}$	M1	oe
	tan 19.5 = 0.354… and $\frac{1}{\sqrt{8}}$ = 0.3535…	A1	oe
6	tan 30 = $\frac{1}{\sqrt{3}}$	B1	
7	Sin 60 = $\frac{\sqrt{3}}{2}$	B1	
	$4\sqrt{3}$	A1	
8	$AC = \sqrt{12}$	M1	
	$\frac{\sqrt{12}}{\sqrt{3}} = \sqrt{4} = 2$	A1	oe