Q	Marking instructions	AO	Marks	Typical solution
11(a)	Completes a reasoned argument to show that $(2-\sqrt{3})^2 = 7-4\sqrt{3}$ Must see three or four correct terms. AG	2.1	R1	$(2-\sqrt{3})^2 = (2-\sqrt{3})(2-\sqrt{3})$ $= 4-2\sqrt{3}-2\sqrt{3}+3$ $= 7-4\sqrt{3}$
	Subtotal		**1**	

Q	Marking instructions	AO	Marks	Typical solution
11(b)	Factorises $21-12\sqrt{3}$ as $3(2-\sqrt{3})^2$, may be seen within an equation or a square root.	3.1a	B1	$x^2 = 21-12\sqrt{3}$ $x^2 = 3(7-4\sqrt{3})$ $x^2 = 3(2-\sqrt{3})^2$ $x = \pm\sqrt{3}(2-\sqrt{3})$ $x = -3+2\sqrt{3}$, $x = 3-2\sqrt{3}$
	Obtains $x = \sqrt{3}(2-\sqrt{3})$ or $x = -\sqrt{3}(2-\sqrt{3})$	1.1a	M1	
	Completes a reasoned argument to obtain $x = -3+2\sqrt{3}$, $x = 3-2\sqrt{3}$	2.1	R1	
	Subtotal		**3**	

	Question 11 Total		**4**	