Q	Marking instructions	AO	Marks	Typical solution
10(a)	Obtains $\frac{h}{\cos x}$ or $h\sec x$ or $\frac{h}{\sin(90-x)}$ **OE**	1.1b	B1	$\frac{h}{\cos x}$
	Subtotal		**1**	

Q	Marking instructions	AO	Marks	Typical solution
10(b)(i)	Forms $\frac{1}{2}\times\frac{h}{\cos x}\times h\times\sin x$ or $\frac{1}{2}\times h\sec x\times h\times\sin x$ or $\frac{1}{2}\times h\tan x\times h$ **and** shows area is $\frac{h^2\sec x\sin x}{2}$ **AG**	2.1	R1	$\frac{1}{2}\times\frac{h}{\cos x}\times h\times\sin x$ $=\frac{h^2\sec x\sin x}{2}$
	Subtotal		**1**	

Q	Marking instructions	AO	Marks	Typical solution
10(b)(ii)	Deduces $\frac{h^2\sec y\sin y}{2}$ or $\frac{h^2\tan y}{2}$	2.2a	R1	$\frac{h^2\sec y\sin y}{2}$
	Subtotal		**1**	

Q	Marking instructions	AO	Marks	Typical solution
10(c)	Forms an expression for the area $\frac{h^2 \sec x \sin x}{2}$ + their **(b)(ii)**	3.1a	M1	Area $= \frac{h^2 \sec x \sin x}{2} + \frac{h^2 \sec y \sin y}{2}$ $\frac{h^2 \sec x \sec y \sin(x+y)}{2} = \frac{h^2 \sec x \sin x}{2} + \frac{h^2 \sec y \sin y}{2}$
	States $\frac{h^2 \sec x \sec y \sin(x+y)}{2} = \frac{h^2 \sec x \sin x}{2} + \frac{h^2 \sec y \sin y}{2}$ or $\frac{h^2 \sec x \sec y \sin(x+y)}{2} = \frac{h^2 \sec x \sin x}{2} + \frac{h^2 \tan y}{2}$ **and** eliminates $\frac{h^2}{2}$	1.1a	M1	$\sec x \sec y \sin(x+y) = \sec x \sin x + \sec y \sin y$ $\sin(x+y) = \frac{\sec x \sin x}{\sec x \sec y} + \frac{\sin y \sec y}{\sec x \sec y}$ $\sin(x+y) = \sin x \cos y + \cos x \sin y$
	Completes rigorous argument to prove that $\sin(x+y) = \sin x \cos y + \cos x \sin y$ **AG**	2.1	R1	
	Subtotal		**3**	

	Question 10 Total		**6**	