Question	Answer	Marks	AO	Guidance
6	$\frac{\sin B}{\sqrt{2}} = \frac{\sin 135°}{2}$ oe OR $\sin B = \frac{1}{2}$ (Angle B is 30°)	B1	3.1a	• Correct statement of sine rule using values • Accept $\frac{\sqrt{2}}{2}$ for $\sin 135°$ • OR correct use to find sin B
	Angle C is 15°	B1	1.1	• **Check diagram** • Finds angle C OR $\sin C = \frac{\sqrt{6}-\sqrt{2}}{4}$ • Allow seen on diagram or embedded in area calculation • Need not state angle B
	Area is $\frac{1}{2} \times 2\sqrt{2} \sin 15°$	M1	1.1	• Using *their* angle C to find area • If *their* C is incorrect then there must be some indication that they are using C and not e.g. B • Implied by correct answer
	Alternative method for first three marks $(\sqrt{2})^2 + c^2 - 2(\sqrt{2})c\cos 135° = 2^2$ oe $(c^2 + 2c - 2 = 0)$	B1		• Correct statement of cosine rule using values • Accept $-\frac{\sqrt{2}}{2}$ for $\cos 135°$
	$c = -1 \pm \sqrt{3}$ so $c = -1 + \sqrt{3}$ as $c > 0$	B1		• **Check diagram** • Length of AB (ignore units) with rejection of other root (rejection may be implied by root not being used)
	Area is $\frac{1}{2}\sqrt{2}(-1 + \sqrt{3}) \sin 135°$	M1		• Using *their* AB • OR use of sine rule to find B or C or sin C **and** use of area formula • OR perpendicular height of triangle $= \sqrt{2} \sin 45° = 1$ **and** area $= \frac{1}{2}(-1 + \sqrt{3})(\times 1)$ • Implied by correct answer

Question	Answer	Marks	AO	Guidance
	$\frac{\sqrt{3}-1}{2}$ cm^2	A1	1.1	• OR $\frac{\sqrt{2}\sqrt{2-\sqrt{3}}}{2}$ OR $\frac{\sqrt{2}\left(\sqrt{6}-\sqrt{2}\right)}{4}$ OR $\frac{\sqrt{12}-2}{4}$ OR $\frac{\sqrt{4-2\sqrt{3}}}{2}$ OR $\frac{\sqrt{4-\sqrt{12}}}{2}$ OR 0.366 or 0.37 • isw • B0 B0 M1A1 is possible
	Alternative method 2 Angle DAC= 45° ⇒DA = DC = 1 Area of △DAC = $\frac{1}{2}$	M1		• **Check diagram** • Adds a point, e.g. D, vertically below C to create two right-angled triangles DBC and DAC soi • Finds side-lengths soi **and** area of right-angled triangle DAC
	DB = $\sqrt{2^2-1^2}=\sqrt{3}$	B1		• Finds length of DB
	Area of △DBC = $\frac{\sqrt{3}}{2}$	B1		• Finds area of right-angled triangle DBC
	Area of △ABC = Area of △DBC −Area of △DAC = $\frac{\sqrt{3}-1}{2}$ cm^2	A1		• OR 0.366 or 0.37
		[4]		