11	$(AB^2 =)\ 7.5^2 - 6^2\ (=\ 20.25)$ **or** eg $(BAC =)\sin^{-1}\left(\frac{6}{7.5}\right)(=53.1...)$ **or** $\cos(BCA) = \frac{6}{7.5}(=0.8)$		6	M1	for a correct first step to find *AB* **or** a complete method to find angle *BAC* **or** a correct first step to find angle *BCA*
	$(AB =)\ \sqrt{7.5^2 - 6^2}\ (=4.5)$ **or** $(AB =)\frac{6}{\tan"53.1"}(=4.5...)$ **or** $(AB =)7.5\cos"53.1"(=4.5...)$ **or** $(BCA =)\cos^{-1}\left(\frac{6}{7.5}\right)(=36.8...)$			M1	for a complete method to find *AB* **or** angle *BCA*
	(Area *ABC* =) $\frac{1}{2}\times 6\times"4.5"$ (= 13.5) **or** $(\text{Area } ABC =)\frac{1}{2}\times 6\times 7.5\times\sin("36.8")(=13.47...\text{ or } 13.5)$			M1	ft [their labelled *AB*] or [their labelled *BCA*] eg for $\frac{1}{2}\times 6\times$[their labelled *AB*] **or** $\frac{1}{2}\times 6\times 7.5\times\sin$[their labelled *BCA*]
	(Area *DAC* =) 31.5 – "13.5" (= 18) **or** "13.5" + 0.5 × 7.5 × *AD* = 31.5 oe			M1	ft (dep on previous M1) allow 31.5 – [their area]
	(*AD* =) ("18" ÷ 7.5) ÷ 0.5 oe			M1	for a complete method to find *AD*, dependent on correct working
		4.8		A1	accept 4.78 – 4.81
					Total 6 marks

12	(a)		$3^2\times 5\times 7$	1	B1	accept 3 × 3 × 5 × 7 oe or 315
	(b)		$3^{11}\times 5^7\times 7^5$	2	B2	fully correct answer (allow *x* = 11, *y* = 7, *z* = 5) (B1 for an answer in the form $3^p\times 5^q\times 7^r$ where one or two of *p*, *q* or *r* are correct)
						Total 3 marks