20	$\left(\frac{-6+5}{2}, \frac{2+3}{2}\right) = \left(-\frac{1}{2}, \frac{5}{2}\right)$ oe		7	M1 for finding the midpoint of *AB*
	$\frac{2-3}{-6-5}\left(=\frac{-1}{-11}=\frac{1}{11}\right)$ oe			M1 for finding the gradient of *AB*
	$\frac{1}{11} = -1$ **or** $(m =) -11$			M1ft their gradient of *AB* (indep) for the correct use of $m_1 \times m_2 = -1$
	$"\frac{5}{2}" = "-11"\left("-\frac{1}{2}"\right) + c$ oe **or** $y - "\frac{5}{2}" = "-11"\left(x - "-\frac{1}{2}"\right)$ **and** $(y =) "-11"(-1) - 3 (= 8)$ **or** $(y =) "-11"\left(-1 - "-\frac{1}{2}"\right) + "\frac{5}{2}" (= 8)$			M1 for an expression that gives the *y* value at *C*
See alt methods	(Perp =) $\sqrt{\left(8-\frac{5}{2}\right)^2 + \left(-1--\frac{1}{2}\right)^2}\left(=\frac{\sqrt{122}}{2}\right)$ **and** $(AB =) \sqrt{3-2^{\,2} + 5--6^{\,2}}\ (=\sqrt{122})$			M1
	(Area of triangle =) $\frac{1}{2} \times \sqrt{122} \times \frac{\sqrt{122}}{2}$			M1 for a complete method
	Correct answer scores full marks (unless from obvious incorrect working)	30.5		A1 oe Allow answers in the range 30.4 – 30.5
				Total 7 marks

Q20 Alternative ways of finding the area of the triangle (final 2 M marks)				
Alt1	$(11 \times 6) - (0.5 \times 1 \times 11) - (0.5 \times 5 \times 6) - (0.5 \times 5 \times 6)$			M1 for any 3 correct triangles
	$(11 \times 6) - (0.5 \times 1 \times 11) - (0.5 \times 5 \times 6) - (0.5 \times 5 \times 6)$			M1 for a complete method
	Correct answer scores full marks (unless from obvious incorrect working)			
Alt 2	$(AC = BC =)\sqrt{5^2 + 6^2}\ (= \sqrt{61})$			M1 for *AC* is perp to *BC*
	(Area of triangle =) $\frac{1}{2} \times \sqrt{61} \times \sqrt{61}$			M1 for a complete method
	Correct answer scores full marks (unless from obvious incorrect working)			
Alt 3	$\sqrt{\left(8 - \frac{5}{2}\right)^2 + \left(-1 - -\frac{1}{2}\right)^2}\left(= \frac{\sqrt{122}}{2}\right)$ **and** $(AM =)\sqrt{\left(-6 - -\frac{1}{2}\right)^2 + \left(2 - \frac{5}{2}\right)^2}\left(= \frac{\sqrt{122}}{2}\right)$ or $(BM =)\sqrt{\left(5 - -\frac{1}{2}\right)^2 + \left(3 - \frac{5}{2}\right)^2}\left(= \frac{\sqrt{122}}{2}\right)$			M1 for the height of the triangle, *AM* and *BM* where *M* is the midpoint of *AB*
	(Area of triangle =) $2 \times \frac{1}{2} \times \frac{\sqrt{122}}{2} \times \frac{\sqrt{122}}{2}$			M1 for a complete method
	Correct answer scores full marks (unless from obvious incorrect working)			
Alt 4	$(AC = BC =)\sqrt{5^2 + 6^2}\ (= \sqrt{61})$ and $(AB =)\sqrt{3 - 2^{\ 2} + \ 5 - -6^{\ 2}}\ (= \sqrt{122})$			M1 for finding *AC*, *BC* and *AB*
	$\sqrt{\left(\frac{\sqrt{122} + 2\sqrt{61}}{2}\right)\left(\frac{\sqrt{122} + 2\sqrt{61}}{2} - \sqrt{122}\right)\left(\frac{\sqrt{122} + 2\sqrt{61}}{2} - \sqrt{61}\right)\left(\frac{\sqrt{122} + 2\sqrt{61}}{2} - \sqrt{61}\right)}$			M1 for applying Heron's formula
	Correct answer scores full marks (unless from obvious incorrect working)			