Question	Scheme	Marks
5(a)	$-\dfrac{1}{12}=\dfrac{10-0}{p-123}$ $\left[\text{or} \quad -\dfrac{1}{12}=\dfrac{0-10}{123-p}\right]$ $\Rightarrow p-123=-12\times10 \Rightarrow p=3*$	M1 A1 cso [2]
(b)	$y-10=-\dfrac{1}{12}(x-3)\Rightarrow 12y+x-123=0$	M1A1 [2]
(c)	$m_k=12$ $y-10=12(x-3)\Rightarrow y=12x-26$	B1 M1A1 [3]
(d)	At C: $y=12x-26$ when $y=0$, $x=\dfrac{26}{12}$ oe $\text{Area}_{ABC}=\tfrac{1}{2}\times10\times\left(123-\tfrac{13}{6}\right)=\tfrac{3625}{6}$ ALT $\text{Area}=\tfrac{1}{2}\begin{vmatrix} 3 & 123 & 13/6 & 3 \\ 10 & 0 & 0 & 10 \end{vmatrix}=\tfrac{3625}{6}$	M1A1 M1A1 [M1A1] [4]
		Total 11 marks

Question	Notes	Marks
5(a)	States a correct expression for the gradient in terms of p either $\quad -\dfrac{1}{12} = \dfrac{10-0}{p-123}\quad$ or $\quad -\dfrac{1}{12} = \dfrac{0-10}{123-p}$ and attempts to solve their equation in p $p-123 = -12\times10 \Rightarrow p = ...$	M1
	Finds the value of $p = 3^*$ Must show an intermediate step e.g. $k = p \pm c$ or $c = \dfrac{p}{k}$ or $c = kp$	A1 cso [2]
(b)	Forms an equation using either the formula or $y = mx + c$ with the given values $y - 10 = -\dfrac{1}{12}(x-3)$ OR $y - 0 = -\dfrac{1}{12}(x-123)$	M1
	For the correct equation in the required form $\quad 12y + x - 123 = 0$ Coefficients must be integers. Allow for $r = 1, s = 12, t = -123$	A1 [2]
(c)	For the gradient of the normal when $x = 3$ is 12	B1
	Forms an equation of the normal using either the formula or $y = mx + c$ with their values of the gradient of the normal. $y - 12 = 12(x-3)$	M1
	For the correct equation in the required form. $y = 12x - 26$	A1 [3]
(d)	Attempts to find the x coordinate at point C $y = 12x - 26$ when $y = 0$, $x = ...$ Their linear equation from (c) with $y = 0$ and attempt to solve.	M1
	For the correct value of x $x = \dfrac{26}{12}$ oe	A1
	For attempting to find the area of triangle ABC Area $= \dfrac{1}{2} \times 10 \times \left(123 - \dfrac{13}{6}\right) = ...$ or Area $= \dfrac{1}{2}\begin{vmatrix} 3 & 123 & 13/6 & 3 \\ 10 & 0 & 0 & 10 \end{vmatrix}$	M1
	For the correct area of the triangle $\dfrac{3625}{6}$ oe isw rounding	A1 [4]
		Total 11 marks