Question 12 – 3:

12(a)	17	3	**M2** for $3 \times 2x^2 - 7$ or better isw or **M1** for $3 \times 2x^2$ oe or $kx^2 - 7$ seen

12(b)(i)	13.4 or 13.41 to 13.42	3	**M2** for $\sqrt{(-5-7)^2 + (8-2)^2}$ oe or **M1** for $(-5-7)^2 + (8-2)^2$ oe
12(b)(ii)	$[y =] 2x + 5$ final answer	4	**M1** for [gradient of $AB =$] $\dfrac{8-2}{-5-7}$ oe **M1dep** for gradient $p = -1 \div their -\dfrac{1}{2}$ oe **M1dep** on previous M1 for substituting $(-1, 3)$ into $y = their \ px + c$ oe where *their* $p \neq 0$
12(b)(iii)	$(5, 0)$	4	**B3** for $\overrightarrow{AD} = \begin{pmatrix} -2 \\ -2 \end{pmatrix}$ or $\overrightarrow{DA} = \begin{pmatrix} 2 \\ 2 \end{pmatrix}$ or coordinates of C $(-7, 6)$ and $\left[\overrightarrow{CD} =\right] \begin{pmatrix} 12 \\ -6 \end{pmatrix}$ oe seen or **B2** for $a = b = 2$ soi or coordinates of C $(-7, 6)$ or **M1** for $a = b$ oe soi or for $a^2 + b^2 = \left(\sqrt{8}\right)^2$ oe or $\cos 45 = \dfrac{a}{\sqrt{8}}$ oe or for $\left[\overrightarrow{DC} =\right] \begin{pmatrix} -12 \\ 6 \end{pmatrix}$ or $\left[\overrightarrow{CD} =\right] \begin{pmatrix} 12 \\ -6 \end{pmatrix}$ seen or $\dfrac{y-8}{x--5} = 1$ oe or $\dfrac{y-2}{x-7} = 1$