

4	<p>Selects an appropriate method – either differentiates, at least as far as:</p> $\frac{dy}{dx} = 2x \dots$ <p>or commences completion of the square: $\left(x - \frac{5}{2}\right)^2 + \dots$</p>	AO1.1a	M1	$y = \left(x - \frac{5}{2}\right)^2 - \frac{25}{4} + a$ <p>y minimised when squared bracket is 0</p> $\left(\frac{5}{2}, a - \frac{25}{4}\right)$ <p>ALT</p> $\frac{dy}{dx} = 2x - 5$
	<p>Fully differentiates and sets derivative equal to zero or fully completes square Allow one error</p>	AO1.1a	M1	<p>so $2x - 5 = 0$ for minimum</p> $x = \frac{5}{2}$
	Obtains both coordinates	AO1.1b	A1	$y = \left(\frac{5}{2}\right)^2 - 5\left(\frac{5}{2}\right) + a = a - \frac{25}{4}$
	Total		3	