Question	Scheme	Marks	AOs
3	$3x^2 + k = 5x + 2$		
	E.g. $3x^2 - 5x + k - 2 = 0$ or $-3x^2 + 5x + 2 - k = 0$	M1	1.1b
	$\{"b^2 - 4ac" < 0 \Rightarrow\}\ 25 - 4(3)(k-2) < 0$	M1	1.1b
	$25 - 12k + 24 < 0 \Rightarrow -12k + 49 < 0$		
	Critical value obtained of $\frac{49}{12}$ o.e.	B1	1.1b
	$k > \frac{49}{12}$ o.e.	A1	2.1
		(4)	
			(4 marks)

Question 3 Notes:

M1: Forms a one-sided quadratic equation or gathers all terms into a single quadratic expression

M1: Understands that the given equation has no real roots by applying $"b^2 - 4ac" < 0$ to their one-sided quadratic equation or to their one-sided quadratic expression $\{=0\}$

B1: See scheme

A1: Complete process leading to the correct answer, e.g.

- $k > \frac{49}{12}$
- $\frac{49}{12} < k$
- $\left\{k : k > \frac{49}{12}\right\}$

with no errors seen in their mathematical argument