Question	Answer	Marks	Guidance
(a)	x^4 term is $[10\times]\left(2x^2\right)^3\left(\frac{k^2}{x}\right)^2$	**M1**	For selecting the term in x^4.
	$80k^4x^4 \Rightarrow a = 80k^4$ $[x^2$ term is $[6\times](2kx)^2 \times 1 = 24k^2x^2 \Rightarrow] \; b = 24k^2$	**A1** **B1**	For correct value of a. Allow $80k^4x^4$. For correct value of b. Allow $24k^2x^2$.
		3	
(b)	$80k^4 + 24k^2 - 216[=0] \qquad \left[\Rightarrow 10k^4 + 3k^2 - 27 = 0\right]$	**M1**	Forming a 3-term equation in k (all terms on one side) with *their* a and b and no x's.
	$\left(2k^2-3\right)\left(5k^2+9\right) \; [=0] \; [\Rightarrow k^2 = \frac{3}{2} \text{ or } -\frac{9}{5}]$	**M1**	Attempt to solve 3-term quartic (or quadratic in another variable) by factorisation, formula or completing the square – see guidance.
	$[k] = \pm\sqrt{\frac{3}{2}}$	**A1**	OE e.g. $\pm\frac{\sqrt{6}}{2}$, $\pm\sqrt{1.5}$, AWRT ± 1.22 Omission of $\pm$ A0. Additional answers A0. If M1 M0, **SC B1** can be awarded for correct final answer, max 2/3.
		3	