Question			Answer	Marks	AO	Guidance	
4	(a)		$\left(2+\frac{1}{3}kx\right)^6 = 2^6 + {}^6C_1 2^5\left(\frac{1}{3}kx\right) + {}^6C_2 2^4\left(\frac{1}{3}kx\right)^2 + \ldots$	M1	1.1a	Attempt at least 2 of these terms – products of binomial coefficients and correct powers of 2 and $\frac{1}{3}kx$	Using kx rather than $\frac{1}{3}kx$ mark as **MR -2**
			$64 + 64kx$	A1	1.1		
			$+\frac{80}{3}k^2x^2$	A1	1.1		
				[3]			
4	(b)		$(3-4x)\left(64+64kx+\frac{80}{3}k^2x^2+\ldots\right)$ $= 192 + \ldots + \left(80k^2 - 256k\right)x^2$	M1*	3.1a	Using two terms from the expansion in **(a)** to find the coefficient of x^2	
			$5k^2 - 16k - 12 = 0 \Rightarrow k = \ldots$	M1dep*	2.1	Forming a 3TQ in k	Using $3\times$ their constant term from (a)
			$k = \frac{8+2\sqrt{31}}{5}$	A1	2.2a	**BC** must be positive root **only**	
				[3]			