Question			Answer	Mark	AO	Guidance
5	(a)		$x^4 + 4x^3h + 6x^2h^2 + 4xh^3 + h^4$	B1 [1]	1.1	Allow $x^4 + \binom{4}{1}x^3h + \binom{4}{2}x^2h^2 + \binom{4}{3}xh^3 + h^4$ oe or $[{}^4C_0]x^4 + {}^4C_1x^3h + {}^4C_2x^2h^2 + {}^4C_3xh^3 + [{}^4C_4]h^4$
5	(b)		$\left[\lim_{h\to 0}\right]\frac{(x+h)^4+2(x+h)-(x^4+2x)}{h}$ $\left[=\frac{4x^3h+6x^2h^2+4xh^3+h^4+2h}{h}\right]$	M1*	2.1	For setting up $\frac{f(x+h)-f(x)}{h}$ with the given form of $f(x)$ or their expansion from **(a)**. lim not required for first 2 marks. Allow other variables e.g. δx for h
			$= \left[\lim_{h\to 0}\right] 4x^3 + 6x^2h + 4xh^2 + h^3 + 2$	A1	1.1	Correct expression simplified correctly
			$\lim_{h\to 0}\left(4x^3 + 6x^2h + 4xh^2 + h^3 + 2\right)$	M1 dep*	1.1	Must have $\lim_{h\to 0}$ here (condone just $h \to 0$ for their h but not $h = 0$). FT their $\frac{f(x+h)-f(x)}{h}$ with their expansion from **(a)** (condone poor simplification)
			$= 4x^3 + 2$	A1 [4]	2.2a	correctly obtained from 1st principles www