Question			Answer	Mark	AO	Guidance
3	(a)	(i)	$1 + (\text{-}2)(\text{-}x) + \frac{(-2)(-3)}{2!}\left(-x\right)^2$ $+ \frac{(-2)(-3)(-4)}{3!}\left(-x\right)^3$	M1	1.1	Correct expressions for at least three terms. May be implied
			$\equiv 1 + 2x + 3x^2 + 4x^3$	A1 [2]	1.1	cao
3	(a)	(ii)	$(n+1)\,x^n$	B1 [1]	2.2a	Allow $x^n = (n+1)\,x^n$
3	(b)		$\frac{1}{1-x}$ oe	B1 [1]	1.1	
3	(c)		$2 + 3x + 4x^2 + 5x^3 + ...$ $= 1 + x + x^2 + x^3 + ...$ $+ 1 + 2x + 3x^2 + 4x^3 + ...$	M1	3.1a	
			$= \frac{1}{1-x} + \frac{1}{(1-x)^2} = \frac{(1-x)+1}{(1-x)^2}$	M1	3.1a	Their (b)(i) $+ \frac{1}{(1-x)^2}$ and attempt single term
			$= \frac{2-x}{(1-x)^2}$	A1 [3]	1.1	cao Unsupported answer, no marks
			$(a-x)(1-x)^{-2}$	M1		
			$a + 2ax + 3ax^2 + 4ax^3 + ...$ $- (x + 2x^2 + 3x^3 + 4x^4 + \ .....)$ $a = 2$ $\frac{2-x}{(1-x)^2}$	M1		
			Justification for all terms up to infinity	A1		
						NB other correct methods exist