Question	Scheme	Marks	AOs
7(a)	$\left(2-\dfrac{x}{2}\right)^7 = 2^7 + \binom{7}{1}2^6\cdot\left(-\dfrac{x}{2}\right) + \binom{7}{2}2^5\cdot\left(-\dfrac{x}{2}\right)^2 + \dots$	M1	1.1b
	$\left(2-\dfrac{x}{2}\right)^7 = 128 + \dots$	B1	1.1b
	$\left(2-\dfrac{x}{2}\right)^7 = \dots - 224x + \dots$	A1	1.1b
	$\left(2-\dfrac{x}{2}\right)^7 = \dots + \dots + 168x^2 \ (+\dots)$	A1	1.1b
		(4)	
(b)	Solve $\left(2-\dfrac{x}{2}\right) = 1.995$ so $x = 0.01$ and state that 0.01 would be substituted for x into the expansion	B1	2.4
		(1)	
		(5 marks)	

Notes:

(a)

M1: Need correct binomial coefficient with correct power of 2 and correct power of x.

Coefficients may be given in any correct form; e.g. 1, 7, 21 or $^7C_0$, $^7C_1$, $^7C_2$ or equivalent

B1: Correct answer, simplified as given in the scheme

A1: Correct answer, simplified as given in the scheme

A1: Correct answer, simplified as given in the scheme

(b)

B1: Needs a full explanation i.e. to state $x = 0.01$ and that this would be substituted and that it

is a solution of $\left(2-\dfrac{x}{2}\right) = 1.995$