Question	Answer	Marks	Guidance
(a)		B1	Table with correct X values and at least one probability $0 < p < 1$. Condone any additional X values if probability stated as 0. No repeated X values.
		B1	3 correct probabilities linked with correct outcomes, may not be in table.
		B1	2 further correct probabilities linked with correct outcomes, may not be in table No repeated X values. **SC** if less than 3 correct probabilities seen, award **SCB1** Sum of *their* probabilities, $0 < p < 1$, of 4,5 or 6 X values = 1 (condone summing to 1 ± 0.01 or better).
		3	

Table for (a):

X	−2	−1	0	1	2
P(X)	$\dfrac{1}{16}$	$\dfrac{3}{16}$	$\dfrac{5}{16}$	$\dfrac{5}{16}$	$\dfrac{2}{16}$
	0.0625	0.1875	0.3125	0.3125	0.125

Question	Answer	Marks	Guidance
(b)	$\left[\dfrac{1}{16} \times -2^2 + \dfrac{3}{16} \times -1^2 \left(+ \dfrac{5}{16} \times 0^2 \right) + \dfrac{5}{16} \times 1^2 + \dfrac{2}{16} \times 2^2 - \left(\dfrac{1}{4} \right)^2 \right]$ $\dfrac{1 \times 4 + 3 \times 1 + 5 \times 0 + 5 \times 1 + 2 \times 4}{16} - 0.25^2$	M1	Appropriate variance formula using $(E(X))^2$ value, accept unsimplified. FT *their* table with at least 3 different X values even if probabilities not summing to 1, $0 < p < 1$. Condone 1 error providing all probabilities <1 and 0.25^2 used
	$\left[= \dfrac{5}{4} - \dfrac{1}{16} = \right] \dfrac{19}{16}$, 1.1875	A1	Condone 1.188 or 1.19 WWW
		2	