Question Number	Scheme	Marks
1.	x | -1 | 2 | 3 | 4 | 7 $\mathrm{P}(X=x)$ | $\frac{9}{k}$ | $\frac{6}{k}$ | $\frac{5}{k}$ | $\frac{4}{k}$ | $\frac{1}{k}$	M1
	$\sum \mathrm{P}(X=x)=1 \Rightarrow \quad \frac{25}{k}=1$	M1
	$k=25$	A1
	$\mathrm{E}(X)=\frac{1}{25}\left[-1\times 9+2\times 6+3\times 5+4\times 4+7\times 1\right]$	M1
	$=\underline{\underline{\frac{41}{25}}}$	A1
		[5]
	Notes	
	1st M1 for at least 3 correct probabilities in terms of k (may be seen used in expression for E(X)) 2nd M1 for attempting to use sum of 5 probs = 1 (ft their probabilities) 1st A1 for $k = 25$ (stated or used correctly) 3rd M1 for attempt at a correct expression at least 3 products (ft their k – value or letter) 2nd A1 for $\frac{41}{25}$ or exact equivalent e.g. 1.64 Correct answer with no incorrect method marks scores 5/5	