Question Number	Scheme	Marks
1.(a)	[F(5) =] $\frac{5}{6}$	B1 (1)
(b)	[E(X) =] $-2\times\frac{1}{4}+1\times\frac{1}{6}+3\times\frac{1}{3}+4\times\frac{1}{12}+6\times\frac{1}{6}$ or $\frac{1}{12}(-6+2+12+4+12)$	M1
	$= \mathbf{2}$	A1 (2)
(c)	[E(X^2) =] $(-2)^2\times\frac{1}{4}+1\times\frac{1}{6}+3^2\times\frac{1}{3}+4^2\times\frac{1}{12}+6^2\times\frac{1}{6}$ (o.e.)	M1
	or $\frac{1}{12}(12+2+36+16+72)$ or $\frac{138}{12}$ or $\frac{23}{2}$ (o.e.)	
	[Var(X) =] $"\frac{23}{2}"-"2"^2 = \mathbf{7.5}$ (o.e.)	M1A1 (3)
Alt(c)	$\mathrm{E}(X-\mu)^2 = (-2-'2')^2\times\frac{1}{4}+(1-'2')^2\times\frac{1}{6}+(3-'2')^2\times\frac{1}{3}+(4-2)^2\times\frac{1}{12}+(6-'2')^2\times\frac{1}{6}$	M1M1
	$= \mathbf{7.5}$ (o.e.)	A1 (3)
	Notes	**Total : 6**
(a)	B1 for $\frac{5}{6}$ or exact equivalents e.g. $\frac{10}{12}$ or $0.8\dot{3}$ isw	
(b)	M1 for an attempt at E(X) with at least 3 correct products seen. E(X) ÷5 (or n) is M0	
	May be seen as $-\frac{1}{2}+\frac{1}{6}+1+\frac{1}{3}+1$ or may be implied by 2	
	A1 2 cao (answer only 2/2 provided no incorrect method is seen)	
(c)	M1 for an attempt at E(X^2) with at least 3 correct products seen. May be seen as $1+\frac{1}{6}+3+\frac{4}{3}+6$ May be implied by $\frac{23}{2}$ oe E(X^2) ÷5 (or n) is M0	
	Allow expression even if labelled as Var(X)	
	M1 for using variance formula with correct substitution ft their E(X) and their E(X^2). May be implied by 7.5 provided a correct E(X^2) is seen	
	A1 for 7.5 or any exact equivalent e.g. $\frac{15}{2}$ (answer only 3/3 provided no incorrect method is seen)	
Alt(c)	M1 for an attempt at $\mathrm{E}(X-\mu)^2$ with at least 3 correct products seen ft on their E(X).	
	May be seen as $4+\frac{1}{6}+\frac{1}{3}+\frac{1}{3}+\frac{8}{3}$. If answer ÷5 (or n) then M0	
	M1 for an attempt at $\mathrm{E}(X-\mu)^2$ with all 6 correct products seen ft on their E(X).	
	May be seen as e.g $4+\frac{1}{6}+\frac{1}{3}+\frac{1}{3}+\frac{8}{3}$ If answer ÷5 (or n) then M0	
	A1 for 7.5 or any exact equivalent e.g. $\frac{15}{2}$	