Question Number	Scheme	Marks
6 (a)	$\left[\mathrm{E}\left(\bar{X}\right)=\right]\dfrac{2a+3+4a+9}{2}$	M1
	$=\dfrac{6a+12}{2}=3a+6\neq a$ * (So biased)	A1*
		(2)
(b)	$'(3a+6)'-a=2a+6$	B1ft
		(1)
(c)	$c=\dfrac{1}{'3'}$	B1ft
	$'\dfrac{1}{3}'\times'\left(3a+6\right)'+d=a$	M1
	$d=-2$	A1
		(3)
(d)	$'\dfrac{1}{3}'\times 7.32-'2'\left[=0.44\right]$ or $3a+6=7.32[\Rightarrow a=0.44]$	M1
	$4\times'0.44'+9$	M1
	$=10.76$	A1
		(3)

	Notes		Total 9
(a)	**M1**	For using the formula $\left(\dfrac{a+b}{2}\right)$ May be implied by $\dfrac{6a+12}{2}$ or $3a+6$	
	A1*	For $\dfrac{6a+12}{2}$ or $3a+6$ and $\neq a$ (Allow $3a+6-a$ or $2a+6$ and $\neq/>0$)	
(b)	**B1ft**	For $2a+6$ or ft their part (a)	
(c)	**B1**	For $\dfrac{1}{3}$ or $\dfrac{1}{\text{coefficient of } a \text{ (from part a)}}$	
	M1	For c × their (3a + 6) + d = a oe written or used May be implied by d = –2	
	A1	Cao	
(d)	**M1**	For their c × 7.32 – their d oe or 7.32 = '$3a$ + 6'	
	M1	For 4 × their 0.44 + 9	
	A1	cao Do not ISW but condone rounding	