

Q	Marking instructions	AO	Marks	Typical solution
14(a)	State one correct expression for the mean of X or the variance of Y using given values of n and p PI	1.1b	B1	Mean of $X = 40p$ Variance of $Y = 25 \times 0.6 \times 0.4$
	Equates their mean and variance and solves to find a value for their p provided $0 < p < 1$ Do not accept mean of Y (15 giving $p = \frac{3}{8}$) as their variance of Y	3.1a	M1	$= 6$ So $40p = 6$ $p = \frac{3}{20}$
	Obtains $p = \frac{3}{20}$ ACF	1.1b	A1	
	Subtotal		3	

Q	Marking instructions	AO	Marks	Typical solution
14(b)	Obtains correct probability AWRT 0.12	1.1b	B1	$P(Y = 17) = 0.1199797$ $= 0.120$
	Subtotal		1	

	Question 14 Total		4	
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