

Question			Answer	Marks	AO	Guidance
8	(a)	(i)	0.219 (3 sf)	B1 [1]	1.1	awrt 0.219 (Condone 21.9%)
8	(a)	(ii)	$1 - P(X \leq 3)$ or $1 - 0.297$ $= 0.703$ (3 sf)	M1 A1 [2]	3.4 1.1	Allow M1 for $1 - P(X \leq 4)$ or $1 - 0.515$ or 0.484 May be implied by correct answer. awrt 0.703 (Condone 70.3%)
8	(b)	(i)	$\binom{15}{r} 0.7^{15-r} 0.3^r$ oe	B1 [1]	1.2	Allow $(1 - 0.3)$ for 0.7 Accept ${}^{15}C_r$ etc. but must be in terms of r
8	(b)	(ii)	$n = 15$ $P(X = r)$ is the $(r \pm 1)$ th term of the expansion	B1 B1 [2]	3.3 2.4	Must be stated (not implied) Allow $P(X = r)$ is a term of the expansion Condone “appears in the expansion” but not “it is the expansion” and not “the coefficient of a term” Condone $P(X = r)$ is the r th term of the expansion