Question	Answer	Marks	Guidance
(a)	$0.6 + 0.4 \times 0.3 = 0.72$ or $1 - 0.4 \times 0.7 = 0.72$	**B1**	Clear identified calculation AG
		1	
(b)	$0.72 \times (0.4 + 0.6 \times 0.2)$	**M1**	$0.72 \times u$, $0 < u < 1$
		M1	$v \times (0.4 + 0.6 \times 0.2)$, or $v \times (1 - 0.6 \times 0.8)$ $0 < v \leqslant 1$ no additional terms **SC B1** for $0.72 \times (0.4 + 0.12)$ or $0.72 \times (1 - 0.48)$
	0.3744	**A1**	WWW. Condone 0.374. **SC B1** for 0.3744 only
		3	
	Alternative method for question (b)		
	[p(P1P2) + p(F1P1P2) + p(P1F2P2) + p(F1P1F2P2)] = $0.6 \times 0.4 + 0.4 \times 0.3 \times 0.4 + 0.6 \times 0.6 \times 0.2 + 0.4 \times 0.3 \times 0.6 \times 0.2$	**M1**	Any two terms unsimplified and correct
		M1	Summing 4 appropriate scenarios by listing or on a tree diagram **SC B1** for 0.24 + 0.048 + 0.072 + 0.0144
	0.3744	**A1**	WWW. Condone 0.374. **SC B1** for 0.3744 only
		3	

Question	Answer	Marks	Guidance
(c)	$P(\text{fails first or second level} \mid \text{finishes game}) = \dfrac{P(\text{fails first or second level} \cap \text{finishes game})}{\textit{their}\ \textbf{(b)}}$	**M1**	Either $0.6 \times 0.6 \times 0.2$ or $0.4 \times 0.3 \times 0.4$ seen Condone 0.072 or 0.048 if seen in **(b)**
	Numerator = P(S SF) + P(FS S) = $0.6 \times 0.6 \times 0.2 + 0.4 \times 0.3 \times 0.4 = 0.072 + 0.048 = 0.12$	**A1**	Both correct accept unsimplified expression. No additional terms
	Required probability = $\dfrac{0.12}{\textit{their}\ \textbf{(b)}}$	**M1**	$\dfrac{\textit{Their}\ \text{sum of two 3-term probabilities as numerator}}{\textit{their}\ \textbf{(b)}}$ or correct
	0.321 or $\dfrac{25}{78}$	**A1**	$0.3205 < p \leqslant 0.321$
		4	