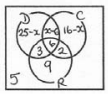
1	0.42 ÷ 0.6 (= 0.7) oe			M1 (indep)
	1 – "0.7" (= 0.3) oe **OR** 1 – 0.6 (= 0.4) oe			M1 (indep)
	"0.3" × "0.4" oe **OR** 1 – (0.42 + 0.6 × "0.3" + "0.4" × "0.7") oe			M1 for a complete method
		0.12	4	A1 oe
				Total 4 marks

2 (a)			3	B3 All 8 values inserted correctly B2 for 4 to 7 correct values B1 for 2 or 3 correct values NB: Expressions involving x do not have to be simplified.
(b)	"[(25 – x) + (x – 6) + (16 – x) + 3 + 6 + 2 + 9 + 5]" = 50		2	M1ft For sum of all their values = 50 oe
		10		A1
(c)		14	1	B1ft
				Total 6 marks

3	(c)	$\frac{2}{40}+\frac{1}{40}$		2	M1 for $\frac{a}{40}$ where $0 < a < 40$ or $\frac{3}{b}$ where $b > 3$ where a and b are integers
			$\frac{3}{40}$		A1 0.075 oe

4	$\frac{4}{16}\times\frac{3}{15}\times\frac{2}{14}\left(=\frac{24}{3360}=\frac{1}{140}\right)$ oe **or** $\frac{7}{16}\times\frac{6}{15}\times\frac{5}{14}\left(=\frac{210}{3360}=\frac{1}{16}\right)$ oe **or** $\frac{5}{16}\times\frac{4}{15}\times\frac{3}{14}\left(=\frac{60}{3360}=\frac{1}{56}\right)$ oe		4	M1 for finding *BBB* **or** *OOO* **or** *LLL*	M3 for $\frac{11}{16}\times\frac{10}{15}\times\frac{9}{14}$ oe
	$\frac{4}{16}\times\frac{7}{15}\times\frac{6}{14}\left(=\frac{168}{3360}=\frac{1}{20}\right)$ oe **or** $\frac{4}{16}\times\frac{3}{15}\times\frac{7}{14}\left(=\frac{84}{3360}=\frac{1}{40}\right)$ oe **or** $\frac{5}{16}\times\frac{4}{15}\times\frac{4}{14}\left(=\frac{80}{3360}=\frac{1}{42}\right)$ oe **or** $\frac{5}{16}\times\frac{4}{15}\times\frac{7}{14}\left(=\frac{140}{3360}=\frac{1}{24}\right)$ oe **or** $\frac{5}{16}\times\frac{4}{15}\times\frac{3}{14}\left(=\frac{60}{3360}=\frac{1}{56}\right)$ oe **or** $\frac{5}{16}\times\frac{7}{15}\times\frac{6}{14}\left(=\frac{210}{3360}=\frac{1}{16}\right)$ oe **or** $\frac{5}{16}\times\frac{7}{15}\times\frac{4}{14}\left(=\frac{140}{3360}=\frac{1}{24}\right)$ oe **or** $\frac{5}{16}\times\frac{4}{15}\times\frac{11}{14}\left(=\frac{220}{3360}=\frac{11}{168}\right)$ oe or $\frac{5}{16}\times\frac{11}{15}\times\frac{10}{14}\left(=\frac{550}{3360}=\frac{55}{336}\right)$ oe			M1 for finding the following in any order *BOO* **or** *BBO* **or** *LLB* **or** *LLO* **or** *LBB* **or** *LOO* **or** *LOB* **or** *LLX* **or** *LXX* (X = not L)	
	$'\frac{24}{3360}'+3\times'\frac{84}{3360}'+'\frac{210}{3360}'+3\times'\frac{168}{3360}'$ oe **or** $1-\left('\frac{60}{3360}'+3\times'\frac{80}{3360}'+3\times'\frac{140}{3360}'+3\times'\frac{60}{3360}'3\times'\frac{210}{3360}'6\times'\frac{140}{3360}'\right)$ oe **or** $1-\left('\frac{60}{3360}'+3\times'\frac{220}{3360}'+3\times'\frac{550}{3360}'\right)$ oe			M1 for a complete method	
		$\frac{990}{3360}$		A1 for $\frac{990}{3360}$ oe e.g. $\frac{33}{112}$ or 0.29(464...)	
				Total 4 marks	

5	1– (0.26 + 0.18) (= 0.56) oe or 0.28 oe or $x + x$ = 1– (0.26 + 0.18) oe		4	M1 0.28 oe may be seen in the table
	45 ÷ 0.18 (= 250) oe or $\frac{45}{18}$ (= 2.5) oe $\frac{"0.56"}{2}\div 0.18\left(=\frac{14}{9}=1.55...\right)$ oe or $\frac{"56"}{2}\div 18\left(=\frac{14}{9}=1.55...\right)$			M1
	$"250"\times\frac{"0.56"}{2}$ oe or $2.5\times\frac{"56"}{2}$ oe or "250"×"0.28" oe or "0.28"÷0.18×45 oe or $"\frac{14}{9}"\times 45$ oe or "28" ÷ 18 × 45 oe or $\frac{45}{18}\times"28"$ oe			M1
		70		A1 ($\frac{70}{250}$ scores M3A0)
				Total 4 marks

6	0.5^3 or $\frac{1}{8}$ or 0.125 oe		4	M1 for finding *DDD*
	0.3×0.2^2 or $\frac{3}{250}$ or 0.012 oe			M1 for finding *WLL* in any order
	$0.5^3 + 3 \times 0.3 \times 0.2^2$ or $"\frac{1}{8}"+"\frac{9}{250}"$ or "0.125" + 3 × "0.012" oe			M1 for a complete method
		0.161		A1 oe
				Total 4 marks
6 ALT	0.3^3 or 0.027 or 0.2^3 or 0.008 oe		4	M1 for finding *WWW* or *LLL*
	$0.3^2 \times 0.5$ or 0.045 or $0.3^2 \times 0.2$ or 0.018 or $0.5^2 \times 0.3$ or 0.075 or $0.5^2 \times 0.2$ or 0.05 or $0.2^2 \times 0.5$ or 0.02 or $0.3 \times 0.5 \times 0.2$ or 0.03 **or** $0.3^2 \times 0.7$ or 0.063 or $0.5^2 \times 0.5$ or 0.125 or $0.2^2 \times 0.5$ or 0.02 or $0.3 \times 0.5 \times 0.2$ or 0.03			M1 for finding *WWD* or *WWL* or *WDD* or *DDL* or *DLL* or *WDL* in any order **or** for finding *WWW'* or *DDD'* or *DLL* or *WDL* in any order
	$1 - (3 \times 0.3^2 \times 0.5 + 3 \times 0.3^2 \times 0.2 + 3 \times 0.5^2 \times 0.3 + 3 \times 0.5^2 \times 0.2 + 3 \times 0.2^2 \times 0.5 + 6 \times 0.3 \times 0.5 \times 0.2)$ **or** $1 - (3 \times 0.3^2 \times 0.7 + 3 \times 0.5^2 \times 0.5 + 3 \times 0.2^2 \times 0.5 + 6 \times 0.3 \times 0.5 \times 0.2)$			M1 for a complete method
		0.161		A1 oe
				Total 4 marks

7	$\sqrt[3]{\frac{27}{64}}\left(=\frac{3}{4}=0.75\right)$		3	M1 for finding the probability of a head
	$\left(1-"\frac{3}{4}"\right)^3$ or $\left(\frac{1}{4}\right)^3$ or 0.25^3			M1 for a complete method
	Correct answer scores full marks (unless from obvious incorrect working)	$\frac{1}{64}$		A1 oe Accept 0.015(625) or 1.55(625)% truncated or rounded
				Total 3 marks

8	(RRR:) $\frac{3}{12}\times\frac{2}{11}\times\frac{1}{10}$ $\left(=\frac{1}{220}\right)$ **or** $(0.25 \times 0.18\ldots \times 0.1 = 0.0045\ldots)$ (2R, 1G:) $\frac{3}{12}\times\frac{2}{11}\times\frac{9}{10}$ $\left(=\frac{9}{220}\right)$ **or** $(0.25 \times 0.18\ldots \times 0.9 = 0.0409\ldots)$ (2G, 1R:) $\frac{3}{12}\times\frac{9}{11}\times\frac{8}{10}$ $\left(=\frac{36}{220}=\frac{9}{55}\right)$ **or** $(0.25 \times 0.81\ldots \times 0.8 = 0.163\ldots)$ (GGG:) $\frac{9}{12}\times\frac{8}{11}\times\frac{7}{10}$ $\left(=\frac{84}{220}=\frac{21}{55}\right)$ $(0.25 \times 0.72\ldots \times 0.7 = 0.381\ldots)$		3	M1oe For an expression to find one of the stated probabilities
	$1-"\frac{1}{220}"$ $(1 - "0.0045\ldots")$ or $"\frac{84}{220}"+3\times"\frac{36}{220}"+3\times"\frac{9}{220}"$ $(0.381\ldots + 3 \times 0.163\ldots + 3 \times 0.0409\ldots)$			M1oe Dep M1 Complete method
	Correct answer scores full marks (unless from obvious incorrect working)	$\frac{219}{220}$		A1oe 0.9954….allow 0.99 (99%) or 0.995 (99.5%)
				Total 3 marks