

1	(a)	0.5, 0.3	P1 A1	for $1 - 0.05 - 0.15 (=0.8)$ oe	Award this mark for any two probabilities that sum to 0.8
	(b)	120	M1 A1	$18 \div 0.15$ oe or $6 + 18 + a + b$ where $a + b = 96$ cao	
2	(a)	$\frac{4}{15}$	B1	oe	4 : 15 gets B0
	(b)	0.7	B1	for 0.7 oe or $\frac{7}{10}$ oe or 70%	
3	(a)	Frequency diagram See end of m/s	C3 (C2) (C1)	for a fully correct frequency diagram for at least 5 correct values in the frequency diagram) for at least 3 correct values in the frequency diagram)	If probabilities used instead of frequencies then maximum of C2 can be awarded Accept equivalent decimal or percentage forms of probability Ignore errors in cancelling of their $\frac{12}{72}$
	(b)	$\frac{12}{72}$	M1 A1	for $\frac{a}{72}$ where $0 < a < 72$ and a is an integer or $\frac{12}{b}$ where $b > 12$ and b is an integer or 12 : 72 or ft their values for 72 and/or 12 from (a) for $\frac{12}{72}$ oe or ft (a)	
4	(a)	0.87, 0.94, 0.94	B2 (B1)	for all probabilities correct for 0.87 or 0.94 correctly placed)	Accept any equivalent fraction, eg $\frac{87}{100}, \frac{47}{50}$ or equivalent percentage form 87%, 94% Accept any equivalent fraction, eg $\frac{39}{5000}$ or equivalent percentage form 0.78% or 7.8×10^{-3}
	(b)	0.0078	M1 A1	for 0.13×0.06 oe 0.0078 oe	
5	(a)	A	B1	cao	Cross or other indication may be seen on or near line provided within tolerance Accept any equivalent fraction, decimal form 0.125 or percentage form 12.5% Do not accept 1 : 8 or 1 to 8 or 1 out of 8
	(b)(i)	Cross at correct position	B1	for cross at $\frac{1}{4}$	
	(b)(ii)	$\frac{1}{8}$	B1	for $\frac{1}{8}$ oe	
6	(a)	$\frac{70}{100}$	M1 A1	for $100 - 30 (= 70)$ or $\frac{30}{100}$ oe for $\frac{70}{100}$ oe	Accept any equivalent fraction, decimal form 0.7 or percentage form 70% If the reason is supported by numerical evidence then that evidence must be accurate. can ft (b) Note: if the answer to part (b) is an even number then 'yes' with supporting evidence is an acceptable answer
	(b)	45	P1 A1	for start to process, eg $30 \div 2 (= 15)$ cao	
	(c)	No with reason	C1	for No with reason or ft (b) Acceptable examples the number of red and yellow counters is an odd number 25 cannot be divided by 2 to give a whole number You can't have half a counter You can't split it evenly Not acceptable examples Yes they are in the ratio 2 : 3 one must be more than the other	
7	(b)	0.105	M1 A1	for 0.3×0.35 oe	

8	Spinner (supported)	P1	for a process to express one relationship, eg $\frac{2}{6}$ oe or $\frac{3}{8}$ oe or 2 : 4 oe or 3 : 5 oe or 2 : 6 oe or 3 : 8 oe	Allow use of words to describe relationship. eg 2 out of 6 Conclusion may be indicated in body of question eg circling spinner or phrase
		P1	for process to express both relationships, eg $\frac{2}{6}$ oe and $\frac{3}{8}$ oe or 2 : 4 oe and 3 : 5 oe or 2 : 6 oe and 3 : 8 oe	
		C1	for indicating (number greater than 5 on) spinner supported by correct values, eg $\frac{8}{24}$ and $\frac{9}{24}$ or 0.33(3..) and 0.37(5) or 33(.3..) % and 37(.5) % or 10 : 20 and 12 : 20 or 16 : 48 and 18 : 48	

9	(a)	evens	C1	oe	Accept 60% or an equivalent fraction eg $\frac{6}{10}$
	(b)	certain	C1	oe	
	(c)	0.6	B1	oe	