Frequency Trees

November 2023 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
15 (a)	**57** 64 **7** **36** **25** 11	B3	for a fully correct frequency tree	If probabilities used instead of frequencies award a maximum of B2
		(B2	for at least 4 figures correctly placed)	
		(B1	for at least 1 figure correctly placed)	
(b)	$\frac{57}{64}$	M1	$\frac{a}{64}$ where $0 < a < 64$ and a is an integer (ft) **or** $\frac{57}{b}$ where $b > 57$ and b is an integer (ft)	Must be values from their diagram with numerator < denominator
		A1	(ft) for $\frac{57}{64}$ oe	Accept probabilities given as equivalent fractions, 0.89(06…) or 89(.06..)%

Question	Answer	Mark	Mark scheme	Additional guidance
17 (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
(b)	$\frac{12}{72}$	M1	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)	
		A1	for $\frac{12}{72}$ oe or ft (a)	Accept equivalent decimal or percentage forms of probability Ignore errors in cancelling of their $\frac{12}{72}$

November 2021 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
17	7 22 15 38 29 9	C1 M1 M1 M1 A1	for correctly placing one of the given values in the diagram eg 38 women or 15 men email for 60 – 38 (=22) **or** 22 (men) correctly placed in the diagram **or** 60 – 38 – 15 (=7) **or** 7 (men texting) correctly placed in the diagram for a method to find 60% of 60, eg. 60 × 0.6 (= 36) for calculating with 60% of 60 eg "36" – ("22" – 15) (= 29) **or** "36" – "7" (=29) **or** (60 – "36") – 15 (= 9) for a fully correct frequency diagram	 May be implied by the total number of texts in the frequency diagram being 36 9 or 29 on the diagram (women branch) gets the two M marks for finding and calculating with 60% of 60 If probabilities used instead of frequencies then maximum of C1M1M1M1A0 can be awarded

June 2023 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
19 (a)	45 150 105 90 65 25	B3 (B2 (B1	for a fully correct frequency tree for at least 4 figures correctly placed) for at least 1 figure correctly placed)	If probabilities used instead of frequencies award a maximum of B2
(b)	30	M1 A1	for eg $\frac{45}{150}$ oe or 45 ÷ 150 (= 0.3) **or** for $\frac{\text{[number of car owners who own a bicycle]}}{\text{[total number of people who own a car]}}$ ft diagram oe for 30 **or** ft diagram	Must be values from their diagram with numerator < denominator