

1	(a)	35 37 38 39 41 42 43 44 45 47 47		3	M1	Ordering values (allow 1 error) error may include missing a value May be implied by correct values for LQ and UQ.
					M1	LQ = 38 and UQ = 45 identified
					A1	
	(b)		January and reason using IQR	1	B1	ft from part (a) January as the IQR is lower oe ignore irrelevant statements about the median if given in addition to correct statements about IQR.
Total 4 marks						

2	(a)	35 ÷ 10 (=3.5), 45 ÷ 15 (=3), 75 ÷ 15 (=5), 40 ÷ 20 (=2), (8 ÷ 10) = 0.8		3	M1	for any two correct fd or two correct bars drawn of different widths
					M1	for all correct fd or at least 3 correct bars drawn
					A1	for a fully correct histogram with 'frequency density' (or fd) and scale on the axis labelled or appropriate key (SC: B2 for all five bars drawn of correct width with heights in the correct ratio) (SC: B1 for three bars drawn of correct width with heights in the correct ratio)
	(b)	10 × 5 + 40 + 8 or $\frac{2}{3} \times 75 + 40 + 8$		2	M1	ft from their histogram in (a) for a correct method
			98		A1	
Total 5 marks						

3	(a)	eg height of first bar labelled as FD 4 or one 1 cm by 1 cm square = 5 people or 1 line of 5 small squares = 1 person or one 2cm by 2 cm square = 20 people etc		2	M1	for the use of frequency density – ie that area is proportional to frequency – with either a correct frequency density unambiguously labelled on axis or for an area representing a correct number of people or 2 correct frequencies completed	
					A1	All 3 correct	
			<i>Working not required, so correct answer scores full marks (unless from obvious incorrect working)</i>	35, 39, 56			
		(b)		Correct bar	1	B1	Width from 30 – 60 and height 1 cm
	(c)	0.5 × "56" + 30 (= 58) or 40 + "35" + "39" + "56" + 30 (= 200)		2	M1ft	follow through their stated value for $20 \leq d < 30$ for total greater than 25 or ft their 3 values in the table for total	
A1ft					ft dep on a completed table oe eg $\frac{29}{100}$ or 0.29 or 29%		
		<i>Working not required, so correct answer scores full marks (unless from obvious incorrect working)</i>	$\frac{58}{200}$				
Total 5 marks							