Question	Answer	Mark	Comments
1(a)	Vertical line from 21 to [15, 17] or 16	M1	implied by correct point marked on curve or vertical axis
	24	A1	SC1 23 or 25

Question	Answer	Mark	Comments
1(b)	(Median =) 22	B1	in working or in box plot
	(LQ =) 18 and (UQ =) 24	B1	in working or in box plot
	Rectangular box with median line and whiskers to 3 and 28	B1	
	Additional Guidance		
	Median and quartiles may be seen on cumulative frequency diagram		
	If the values for the median and/or the LQ and UQ are correct in working but incorrect in the box plot award up to B1B1B0		

Q	Answer	Mark	Comment
2	Any two correct readings of 13 at 50 (years) 30 at 60 (years) 66 at 70 (years)	B1	may be seen on the graph implied by a difference (frequency) of 17 for 50s or 36 for 60s
	Correct difference (frequency) for any two readings eg difference (frequency) of 14 for readings of 7 at 45 (years) and 21 at 55 (years)	M1	must be from two readings correct for those ages a difference (frequency) of 17 for 50s or 36 for 60s scores B1M1
	17 and 36 and Yes	A1	Yes can be implied eg 34 < 36
	Additional Guidance		
	Readings of 3, 13 and 30 (from 40, 50 and 60) with differences (frequencies) of 10 and 17		B1M1A0
	Award the B1 mark for any two of the three possible correct readings, even if multiple readings are taken from the graph		
	Their readings and differences (frequencies) must be integers to gain marks		
	For readings not giving an integer value allow the integer above or below the reading eg for a reading at 53 allow 17 or 18		
	Readings of 11 or 12 at 49, 27 or 28 at 59 and 64 or 65 at 69, leading to differences (frequencies) of 15, 16 or 17 and 36, 37 or 38		B0M1A0
	Differences (frequencies) other than 17 and 36 must come from readings seen on the graph or linked to ages in working		

Q	Answer	Mark	Comment
3(a)	51, 58 and 60	B1	

Q	Answer	Mark	Comment
3(b)	$160 < h \leqslant 170$	B1	

Q	Answer	Mark	Comment
3(c)	Points plotted with upper class boundaries and cf values condone (150, 0) omitted or incorrectly plotted for this mark only	B1ft	$\pm \frac{1}{2}$ square ft their cumulative frequencies, which must be increasing ignore bars drawn if points clearly plotted
	Smooth curve or polygon	B1ft	ft their 5 or 6 points (point with cf 0 may be omitted) must be increasing and not a single straight line
	Additional Guidance		
	For the second mark, the points must be evenly spaced accept an omission of the point with cf 0, but do not accept an incorrect starting point for the pattern of their points accept a horizontal line drawn from their final point, but do not accept a continuation of the curve or polygon		
	Points plotted at lower class boundaries or midpoints, but with correct smooth curve or polygon for their points		B0B1
	Bars drawn with correct curve		B1B1
	Bars drawn without curve but with correct points clearly plotted		B1B0
	Bars drawn without correct curve or correct points plotted		B0B0

Q	Answer	Mark	Comment
3(d)	**Alternative method 1**		
	Vertical line drawn from 176 to curve or polygon	M1	implied by correct reading for their increasing curve or polygon or mark at correct place on their increasing curve or polygon or on the vertical axis $\pm \frac{1}{2}$ square
	Correct value for 60 – their reading or correct value for their 60 – their reading	A1ft	ft their increasing curve or polygon answer must be an integer their 60 must be from an increasing curve or polygon
	Alternative method 2		
	$2 + 7 + \frac{4}{10} \times 35$ or $2 + 7 + 14$ or $4 + 12 + \frac{6}{10} \times 35$ or $4 + 12 + 21$ or 37	M1	
	23	A1	
	Additional Guidance		
	In alternative method 1 condone the curve or polygon drawn only for the required section (170 – 180) as long as the cumulative frequencies are increasing throughout		
	Answer 23 not from alternative method 2 must match their graph		