

BAR CHARTS

Pearson Edexcel - Monday 12 November 2018 - Paper 3 (Calculator) Higher Tier

1.

4	(a)	5	M1	"2" ÷ 40 × 100	"2" comes from their reading of the height of the 20 to 24 column
			A1	cao	
	(b)	9.5 shown	M1	for frequencies of 11, 8, 13, 6 and 2 (allow one error) or for midpoints 2, 7, 12, 17 and 22	May be seen on chart
			M1	for finding at least 4 products fx consistently within interval (including end points)	
			M1	for $\Sigma fx \div ("11" + "8" + "13" + "6" + "2")$ or $(11 \times 2 + 8 \times 7 + 13 \times 12 + 6 \times 17 + 2 \times 22) \div 40$ or $\Sigma fx (=380)$ and $9.5 \times ("11" + "8" + "13" + "6" + "2") (=380)$	Evidence of two different calculations that should lead to 380 are required for this mark
		CI	for correct figures showing the answer or accurate figures to compare from correct working eg 380 from two calculations		

OCR GCSE – Tuesday 12 June 2018 – Paper 6 (Calculator) Higher Tier

2.

18	(a)		Bars are of different width oe	1		0 for large tin looks larger than it is 0 for the bars are different sizes 0 for incorrect/no x-axis
	(b)		11.4[...] nfw	4	<p>B1 for 1.5 or $\frac{3}{2}$ or $3 : 2$ soi</p> <p>AND</p> <p>M2 for $10 \times \sqrt[3]{1.5}$</p> <p>or</p> <p>M1 for $\sqrt[3]{1.5}$ soi by 1.14(47...)</p> <p>If 0 scored allow SC1 for 15 as final answer or seen radius of large tin</p> <p>Alternative:</p> <p>B1 for 0.666 to 0.667 or $\frac{2}{3}$ or $2 : 3$</p> <p>soi</p> <p>AND</p> <p>M2 for $10 \div \sqrt[3]{0.666 \text{ to } 0.667}$ oe</p> <p>or</p> <p>M1 for $\sqrt[3]{0.666 \text{ to } 0.667}$ oe soi 0.873(...)</p>	

3.

23(a)	Alternative method 1		
	30 ÷ 20 or 1.5	M1	May be implied by correct labelling on vertical axis
	12 ÷ 15 or 0.8	M1	
	Draws block for $65 \leq x < 80$ with height 8 small squares	A1	Mark intention
	Alternative method 2		
	12 ÷ (30 ÷ 6) or 12 ÷ 5 or 2.4	M1	
	their 2.4 ÷ 1.5 or 1.6	M1dep	
	Draws block for $65 \leq x < 80$ with height 8 small squares	A1	Mark intention
	Alternative method 3		
	12 ÷ (30 ÷ 150) or 12 ÷ 0.2 or 60	M1	
	their 60 ÷ 7.5 or 8	M1dep	
	Draws block for $65 \leq x < 80$ with height 8 small squares	A1	Mark intention
	Alternative method 4		
	1.5 × (30 ÷ 6) or 1.5 × 5 or 7.5	M1	
	12 ÷ their 7.5 or 1.6	M1dep	
	Draws block for $65 \leq x < 80$ with height 8 small squares	A1	Mark intention
	Additional Guidance		
	Draws block for $65 \leq x < 80$ with height 8 small squares		3 marks

23(b)	10×4.5 or $9 \times 30 + 6$ or $225 + (30 + 6)$ or 45 or 10×3.6 or $7.2 \times (30 + 6)$ or $180 + (30 + 6)$ or 36 or 25×2 or $10 \times (30 + 6)$ or $250 + (30 + 6)$ or 50 or $34.6 \times 30 + 6$ or $865 + (30 + 6)$	M1	oe May be seen on histogram
	173	A1	
	Additional Guidance		

AQA GCSE – Thursday 8 June 2017 – Paper 2 (Calculator) Higher Tier

4.

24	Alternative method 1	
	(LQ =) 10 and (UQ =) 33 and answer 23	B4 B3 (LQ =) 10 and (UQ =) 33 B2 (LQ =) 10 or (UQ =) 33 B1 Any two correct frequencies from 8, 8, 12 and 20
	Alternative method 2	
	(LQ =) 10.3125 and (UQ =) 33.75 and answer 23.4375	B4 B3 (LQ =) 10.3125 and (UQ =) 33.75 B2 (LQ =) 10.3125 or (UQ =) 33.75 B1 Any two correct frequencies from 8, 8, 12 and 20
	Additional Guidance	
	Alt 2 is using $\frac{48+1}{4} = 12.25$ and $\frac{3(48+1)}{4} = 36.75$ to work out quartiles	
	Correct frequencies must be for the correct bar	
	33.75 may come from $\frac{3}{4} \times 45$	B0
	Allow B1 for two correct frequencies even if not subsequently used	B1
	Frequency of 8 seen once with no other correct frequencies counts as one correct	
	Frequency of 8 seen twice counts as two correct	B1
	$36 - 12 = 24$ or $36.75 - 12.25 = 24.5$ with < 2 correct frequencies	B0
Answer 23 with neither quartile correct and < 2 correct frequencies	B0	
10-33 and 23	B4	
10-33	B3	
Do not allow dashes or vertical lines at 10 and/or 33 to imply correct quartiles		

AQA GCSE – Sample Paper 2 (Calculator) Higher Tier

5.

22	Alternative method 1		
	25×11 or 275	M1	
	their $275 \div 22$ or 12.5	M1dep	
	$15 \times 30 \div$ their 12.5	M1	
	36	A1	
	Alternative method 2		
	25×11 or 275	M1	
	$15 \times 30 \div$ their 275 or [1.6, 1.64]	M1dep	
	their [1.6, 1.64] $\times 22$	M1	
	36	A1	
	Alternative method 3		
	11 squares or 275 squares	M1	
	$22 \div 11$ or 2 or $22 \div 275$ or 0.08	M1dep	
	their 2×18 or their 0.08×450	M1	
	36	A1	

22	Alternative method 4		
	$\frac{15}{25}$ or $\frac{30}{11}$	M1	
	$\frac{15}{25} \times \frac{30}{11}$ or $\frac{18}{11}$	M1dep	oe fraction
	their $\frac{18}{11} \times 22$	M1	
	36	A1	
	Alternative method 5		
	$25 \times h = 22$ or $\frac{22}{25}$ or 0.88	M1	oe
	$0.88 \div 11$ or 0.08	M1dep	oe eg frequency density axis labelled with correct scale
	their $0.08 \times 30 \times 15$	M1	
	36	A1	