MEAN, MEDIAN

Pearson Edexcel – Monday 8 June 2020 - Paper 3 (Calculator) Higher Tier

1.

7	16.5	M1	for method to find total of ages of boys, eg 18×16.2 (= 291.6) or total of ages of girls, eg 27×16.7 (= 450.9) or total of ages of boys and girls, eg 742.5	May use an equivalent method with number of boys and girls used in the ratio 2 : 3 $\frac{16.2+16.7}{2}$ scores 0 marks
		M1	for complete method, eg $\frac{"291.6"+"450.9"}{45}$ $(= \frac{742.5}{45})$	
		A1	cao	

Pearson Edexcel – Monday 8 June 2020 - Paper 3 (Calculator) Higher Tier

2.

17	7.645	P1	for process to use area to find at least one frequency, eg for first frequency $(7.2 - 6.4) \times 10$ (= 8) or $(7.2 - 6.4) \times 5$ (= 4) or $4 \times 5 \times 5$ (= 100)	Frequencies could be written on the graph
		P1	for process to find all frequencies, eg 8, 20, 40, 12 or multiples eg 4, 10, 20, 6 or 100, 250, 500, 150	Marks are for correct processes, one or more frequencies may be incorrect
		P1	(dep P2) for process to estimate mean, eg $((6.8 \times [8]) + (7.4 \times [20]) + (7.8 \times [40]) + (8.1 \times [12]))$ $\div ([8] + [20] + [40] + [12])$	
		A1	for 7.645 (accept 7.65)	Award full marks if a correct answer is seen in working and is then incorrectly rounded.

Pearson Edexcel - Tuesday 21 May 2019 - Paper 1 (Non-Calculator) Higher Tier

3.

11	(a)	59, 53, 66	B2	for Median = 59, LQ = 53, UQ = 66, may be seen in working	
			(B1	for one correct)	
	(b)	Yes, with reason	C1	for Yes and comment comparing median ages, ft from (a) **Acceptable examples** "59" < 70 All statistics/values are lower for coach A (so they are younger) Median is lower The middle age is lower on coach A **Not acceptable examples** Median is higher Median for coach A is "59" and coach B is 70 The oldest on coach A is 79 and the oldest on coach B is 85 There are people on coach B that are older than on coach A	
	(c)	No, with reason	C1	for No and comment comparing spreads of ages from ranges or IQRs, ft from (a) **Acceptable examples** 38 < 43 **or** "13" < 19 Greater difference between greatest and least age for coach B Range for coach B is larger than coach A The range of ages is wider on coach B than on coach A The range is 5 greater on coach B There is a smaller difference between the lower and upper quantiles on coach A than on coach B The IQR is shorter for coach A **Not acceptable examples** Quartiles are less for coach A 53 < 54 **or** 79 < 85 (oe) Range for coach A is 38 and range for coach B is 43 Coach A ranges from 41-79 but coach B ranges from 42-85	Working A: Range = 38, IQR = "13" B: Range = 43, IQR = 19

Pearson Edexcel - Monday 6 November 2017 - Paper 2 (Calculator) Higher Tier

4.

3	(a)		31.4	P1	for working with circumference formula, eg $\pi \times 80$ (=251. …) oe
				A1	for answer in the range 31.4 to 31.5 accept 10π
	(b)		No (supported)	C1	Mean distance stays the same with reason, eg total distance remains unchanged or same number of points

Pearson Edexcel - Wednesday 8 November 2017 - Paper 3 (Calculator) Higher Tier

5.

11	(a)		57	B1	cao
	(b)		Decision and reason	C1	Jamil might not be correct and reason, eg the maximum weight could be less than 80 or the minimum weight could be less than 40
	(c)		Shown	C1	for evidence of reading from the graph at weight 65 (= 48 to 49) or at cf 45 (= 63)
				C1	eg 25% of 60 is 15 but only 11 potatoes have a weight greater than 65g or 25% of potatoes have a weight greater than 63g

Pearson Edexcel - Thursday 25 May 2017 - Paper 1 (Non-Calculator) Higher Tier

6.

7			72	P1	for showing the process of 30×60 (=1800) or 20×54 (=1080)
				P1	(dep P1) for showing the complete process e.g. ("1800" − "1080") ÷ 10
				A1	concluding the answer is 72 (and not 66)

Pearson Edexcel - Tuesday 13 June 2017 - Paper 3 (Calculator) Higher Tier

7.

3	(a)		12	B1	cao
	(b)		Explanation	C1	No with statement about not being mutually exclusive events eg a person could be in both categories

Pearson Edexcel - Specimen Papers Set 2 - Paper 1 (Non-Calculator) Higher Tier

8.

13			more than	C1	Makes reference to different numbers of girls and boys
				C1	Completes reasoning eg there are more (boys) with 80% than (girls) with 70% or correct mean $(700+1200) \div 25 = 76$

Pearson Edexcel - Specimen Papers Set 1 - Paper 1 (Non-Calculator) Higher Tier

9.

9			'Yes' with correct working	P1	begins process of working with mean eg 35×10 (=350) or 33×11 (=363) or $10\times(35-33)$ (=20) or $11\times(35-33)$ (=22)
				P1	(dep) finding the difference eg "363"−"350", or 33 − "20" or 35 − "22"
				C1	'Yes' with 13 from correct working

Pearson Edexcel - Wednesday 4 November 2015 - Paper 1 (Non-Calculator) Higher Tier

10.

13			20	3	M1 for 30 × 14 (=420) or 18×10 (=180) M1 for 30 × 14 – 18 × 10 or "420" – "180" (=240) A1 cao

Pearson Edexcel - Friday 13 June 2014 - Paper 2 (Calculator) Higher Tier

11.

20			75.5	3	M1 for 25 × 67.8 (= 1695) or 55 × 72.0 (= 3960) M1 (dep) for ("3960" − "1695") ÷ 30 A1 cao

Pearson Edexcel - Wednesday 6 November 2013 - Paper 1 (Non-Calculator) Higher Tier

12.

13	35 × 10 = 350 33 × 11 = 363 363 – 350 = 13 OR 10×(35–33) =20 33 – 20 = 13		13	3	M1 35 × 10 (= 350) or 33 × 11 (= 363) M1 (dep) finding the difference in their totals e.g. '363' – '350' A1 cao OR M1 10×(35 – 33) (=20) or 11×(35 – 33) (=22) M1 (dep) 33 – '20' or 35 – '22' A1 cao

Pearson Edexcel - Tuesday 11 June 2013 - Paper 1 (Non-Calculator) Higher Tier

13.

6			7	3	M1 for 4 × 10 **or** 40 **or** $\dfrac{12+6+15+x}{4}$ **or** a correct equation M1 for a complete correct method A1 cao

Pearson Edexcel - Wednesday 13 June 2012 - Paper 2 (Calculator) Higher Tier

14.

13	5×3+15×8+25×11+35×9+45×9 =1130 1130 ÷ 40		28.25	4	M1 for finding fx with x consistent within intervals (including the end points) allow 1 error M1 (dep) for use of all correct mid-interval values M1 (dep on first M1) for $\Sigma fx \div 40$ or $\Sigma fx \div \Sigma f$ A1 for 28.25 or $28\frac{1}{4}$

Pearson Edexcel - Monday 5 March 2012 - Paper 4 (Calculator) Higher Tier

15.

2	16 × 7 = 112 112 - 87		25	2	M1 for 6 × 14.5 (= 87) or 7 × 16 (=112) or 6 × 1.5 (= 9) or 7 × 1.5 (= 10.5) A1 for 25

Pearson Edexcel - Friday 10 June 2011 - Paper 4 (Calculator) Higher Tier

16.

11	(a)		0	1	B1 cao
	(b)	$(0 + 6 + 14 + 24 + 8) \div 32$ $= 52 \div 32 = 1.625$	1.625	3	M1 for multiplying $f \times x$ (at least 3 correct) M1 (dep) for $\sum fx \div \sum f$ A1 for 1.625, 1.62, 1.63, 1.6 $1\frac{5}{8}$

Pearson Edexcel - Tuesday 10 November 2009 - Paper 4 (Calculator) Higher Tier

17.

18	(a)		$150 \leq h < 160$	1	B1 for $150 \leq h < 160$ (accept 150 to 160)
	(b)	$(125 \times 8) + (135 \times 16) +$ $(145 \times 25) + (155 \times 30) +$ (165×21) $= 1000 + 2160 + 3625 +$ $4650 + 3465$ $= 14900$ $14900 \div 100$	149	4	M1 for $f \times h$ for at least 3 consistent values of h in or at either end of intervals M1 (dep) for use of all correct mid-interval values (for 1st interval accept 124.5 to 125) M1 (dep on 1st M1) for $\sum fh \div \sum f$ A1 cao

OCR GSCE – Tuesday 3 November 2020 – Paper 4 (Calculator) Higher Tier

18.

2			63	4	M1 for 80 + 65 + 95 or 240 seen as total M1 for *their* 240 × [0].6 or 144 M1 for *their* 144 − 43 − 38 If **0** scored **SC1** for 0.6 × 95 or 57	condone $\frac{63}{95}$ for 4 marks and mark the method leading to *their* answer

19.