

1	(a) (1) (3) 9 43 69 77 79 (80)	B1	1	Table not copied so values not seen	B0
	(b) All 8 points plotted ft	P2		After P0, at least 5 correct plots ft	P1
	Smooth ogive curve through all plotted points	C1	3	Dependent on P1. Straight line graphs or ruled sections will be C0	
	(c) (i) 192 –198	B1	1	Not 200.	
	(ii) 142 – 148	B1	1	After B0 in (c), reading their cumulative curve at 40 and 8	M1
	(d) Curve through the points (50,3), (350,80), (250,40), (275,60), (200,20)	P3	3	After P0, 3 correct points plotted 2 correct points plotted	P2 P1
	(e) (i) 71 or 72	B1	1	In (e) (i) and (ii), accept non integer values rounding to these given.	
	(ii) 47, 48 or 49	B1	1	After B0 in (e), M1 available for reading both graphs at 260	
(f) B with some support	B1	1	Support such as the probabilities $\frac{11}{80}$ or $\frac{40}{80}$ The reference must imply a direct comparison of the brands at 250.		
			[12]		

<b>2</b>	<b>(a)</b>	(0) (4) 30 80 136 (140) (0) 10 30 60 15 140	<b>B1</b> <b>B1</b>	<b>2</b>	
	<b>(b)</b>	Ignore plots at $x = 0$ [Accept two separate graphs] All 10 other points plotted ✓ (P1 for at least 6 plotted ✓) [Some points may represent 2 plots] 2 smooth curves, with at least one label, not grossly thick, through all appropriate plots of which at least 6 correct Curves must be ogive shape (no negative gradients)	<b>P2</b>  <b>C1</b>	<b>3</b>	
	<b>(c)(i)</b>	64 to 68	<b>V1</b>		
	<b>(ii)</b>	Their <b>(i)</b> – (42 to 44) evaluated ✓	<b>Q1</b>		
	<b>(iii)</b>	English 56 to 58 <u>and</u> Maths 63 to 65	<b>N1</b>	<b>3</b>	
	<b>(d)</b>	Maths easier ✓, with sensible reason (e.g. greater median, or U.Q. L.Q. etc.) (Follow through from their curves if labelled) (There must be two curves)	<b>R1</b>	<b>1</b>	
	<b>(e)(i)</b>	$\frac{12}{49}$ cao	<b>B1</b>	<b>1</b>	
	<b>(ii)</b>	$\frac{4}{140} \times \frac{115}{140} + \frac{25}{140} \times \frac{136}{140}$ $\frac{193k}{980k}$ isw (e.g. $\frac{3860}{19600}$ ) <b>OR</b> 0.1965 to 0.1975 <b>OR</b> 19.65 to 19.75% After M0 allow SCB1 for $\frac{3860}{140 \times 139} = \frac{3860}{19460} = \frac{193k}{973k}$ or 0.1980 to 0.1990 isw	<b>M1</b>  <b>A2</b>	<b>2</b>	
					<b>12</b>

<b>9</b>	<b>(a)</b>	<b>(i)</b> 54 to 56	1	
		<b>(ii)</b> 28 to 30	1	
	<b>(b)</b>	Mathematics + valid reason	1	e.g. because median is lower or both medians stated. because the curve for Maths is to the left of/higher than the curve for English. Comparisons at arbitrarily chosen points will be 0

<b>9</b>	<b>(a)</b>	<b>(i)</b>	4 [minutes] 18 [seconds]	<b>1</b>	
		<b>(ii)</b>	1 [minute] 0 [seconds]	<b>2</b>	<b>B1</b> for attempt to read at 12.5 and 37.5
	<b>(b)</b>		10, 12, 13, 5, 2	<b>2</b>	<b>B1</b> for 3 correct
	<b>(c)</b>		17 [minutes] 30 [seconds]	<b>2</b>	<b>B1</b> for three times only seen including 6, 5:30 and time in range $5:30 < t \leq 6$

Mega Lecture

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