

This test is divided into non-calculator (30 minutes) and calculator (20 minutes) sections which can be delivered separately.

The following marks are awarded for each question.

B	Unconditional accuracy mark.
M	Method mark – the correct method must be shown, but there may be an arithmetic error; the sight of the value given in brackets implies the award of the method mark.
A	Accuracy mark – unless the question specifies that working must be shown, then the sight of the correct answer implies the award of full marks (unless the answer clearly comes from incorrect working).
C	Communication mark.
P	Process mark – to show the correct process for problem solving. Any other process of a similar standard to achieve an accurate result is acceptable to achieve this mark.
FT	Incorrect values may be followed through from one step to the next, provided that the correct method is seen in each step and the only errors are arithmetic. This is shown in mark schemes by putting a number in inverted commas.
OE	Or equivalent answer mark.

Non-Calculator			
Q	Answer	Mark	Comment
1a	Completed bar	B1	slightly nearer to 25 than 30
1b	Mrs Liu	B1	
1c	Mrs Gray & Miss Dior	B1	both needed
1d	5 (km)	B1	
3	Not affected by extreme – median Every value makes – mean Can be used with non – mode	B2	B2 for all correct; B1 for two correct

5	All the same age or all similar tastes	B1	OE if biased need reason why
	Sample too small	B1	
7	$(5x + 10y) \div 15$	M1	for $5x$ or $10y$ or $\div 15$, e.g. $(x + y) \div 15$ accept $\frac{(x + 2y)}{3}$
		A1	

 Calculator			
9a	7	B1	
9b	8	B1	
11a	2	B1	
11b	1	B1	
11c	118	M1	$1 \times 17 + 2 \times 14 + 3 \times 6 + 4 \times 10 + 5 \times 3$ $17 + 28 + 18 + 40 + 15$ may be products by table – award for four correct products with intention to add
		A1	FT (dep on M1)
11d	2.36	M1	“118” $\div 50$ their 118 but must be from correct working
		A1	
11e	4	M1	$5 - 1$
		A1	

 Calculator			
13a	$0 < m \leq 20$ (minutes)	B1	accept 0 – 20, etc.
13b	$20 < m \leq 40$ (minutes)	M1	20 or 20.5 mentioned. accept 20 – 40 OE
		A1	
13c	41.5	M1	M1 for at least four products – must multiply consistently by a value in the range (can be all lower/upper values) $10 \times 12 + 30 \times 9 + 50 \times 8 + 70 \times 6 + 90 \times 5$
		M1	M1 for use of mid-values with at least four correct and divide by 40 $(10 \times 12 + 30 \times 9 + 50 \times 8 + 70 \times 6 + 90 \times 5) \div 40 = 1660 \div 40$
		A1	
15	$51.2857\dots - 51.3$	M1	$3 \times 45 (= 135)$ or $4 \times 56 (224)$
		M1	$(3 \times 45 + 4 \times 56) \div 7$
		A1	3 significant figures or better

Non-Calculator			
Question	Topic	Step	Mark
1	Bar chart completing and reading from	4th	4
3	Matching up mean median & mode	4th	2
5	Sampling	6th	2
7	Combined mean in algebra	8th	2

 Calculator			
9	Range	2nd	2
11	Frequency tables; range, median and mode	4th	8
13	Estimating median and mode	7th	6
15	Finding missing values	8th	3

