

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 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.

Q	Answer	Mark	Comment
1a	6	B1	
1b	7	B1	
1c	4	B2	B1 for $10 - 6$ or 6 and 10 clearly indicated
1d	7.6	M1	for $42 + 35 + 16 + 9 + 50$ OE (= 152) allow one arithmetic error
		M1	(dep on M1) for " $152 \div 20$ "
		A1	
2	4 4 8 14 15	M1	for five numbers with at least two from median of 8 or mode of 4 or sum of 45 or range of 11
		M1	for five numbers with at least three or four from median of 8 or mode of 4 or sum of 45 or range of 11
		A1	

3a	52	B1	
3b	53	B1	
3c	Comparison of medians	C1	e.g. the median age of the females was slightly higher than the median age of the males (must be in context; i.e. refer to age)
3d	65	B1	
3e	No, with reason	B2	for 'No' with male range = 48 and female range = 38 B1 for one correct range
4a	$ \begin{array}{l l} 0 & 8 \ 9 \\ 1 & 2 \ 5 \ 6 \ 7 \ 9 \\ 2 & 7 \ 8 \ 8 \ 9 \\ 3 & 2 \ 3 \ 5 \ 7 \ 8 \ 8 \\ 4 & 5 \ 8 \\ 5 & 0 \end{array} $ <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 100px;">Key: 1 2 = 12 marks</div>	B3	B2 for unordered diagram and key or for ordered diagram with no key; allow two numerical errors in the diagram) B1 for unordered diagram, no key; allow two numerical errors in the diagram
4b	$\frac{9}{20}$	B2	for $\frac{9}{20}$ OE B1 for $\frac{a}{20}$, $a < 20$ or $\frac{9}{b}$, $b > 20$)
5a	150°	M1	for $50 \div 120 \times 360$ OE
		A1	for 150
5b	Explanation	C1	e.g. $32 \div 360 \times 120 (= 10.6666\dots)$ is not a whole number
6a	4	B1	
6b	December	B1	accept D
6c	Describe trend	B1	e.g. Sales went up and then down
6d	Reason	B1	e.g. People buy more ice-cream in the summer

7	900 (g)	M1	for $400 \times 4 (= 1600)$ or $500 \times 5 (= 2500)$																				
		M1	for $(500 \times 5) - (400 \times 4)$																				
		A1																					
8a		B2	B1 for all points plotted correctly at mid-interval but not joined OR points plotted consistently within the intervals and joined OR correct frequency polygon with one point incorrectly plotted																				
8b	20 (%)	M1	for $6 \div 30 \times 100$ OE																				
		A1																					
9a	Plot (38, 41) and (25, 28)	B1																					
9b	Positive (correlation)	B1	accept strong positive (correlation)																				
9c	31 to 35	B2	B1 for a line of best fit and an attempt at a reading from 40 on paper 2 to horizontal axis																				
9d	Answer and reason	B1	e.g. Probably not: It would be an outlier on the scatter diagram / all the other students have done better on paper 2 than paper 1, OE																				
10	11 <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>P</th> <th>C</th> <th>L</th> <th>Total</th> </tr> </thead> <tbody> <tr> <th>B</th> <td>10</td> <td>6</td> <td>29</td> <td>45</td> </tr> <tr> <th>G</th> <td>15</td> <td>9</td> <td>x</td> <td>35</td> </tr> <tr> <th>Total</th> <td>25</td> <td>15</td> <td>40</td> <td>80</td> </tr> </tbody> </table>		P	C	L	Total	B	10	6	29	45	G	15	9	x	35	Total	25	15	40	80	M1	for correct first step e.g. $80 - 15 - 40 (= 25 \text{ pizza})$ e.g. $15 - 9 (= 6 \text{ boys and chicken})$ e.g. $80 - 45 (= 35 \text{ girls})$
			P	C	L	Total																	
		B	10	6	29	45																	
G	15	9	x	35																			
Total	25	15	40	80																			
M1	for a correct first step e.g. " $25 - 10 (= 15 \text{ girls and pizza})$ " e.g. $45 - 10 - "6" (= 29 \text{ boys and lasagne})$																						
M1	for a complete method e.g. " $35 - "15" - 9$ " e.g. $40 - "29"$																						
	11																						

		A1	for 11
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11a	$600 < w \leq 800$	B1	accept 600 – 800, etc.
11b	$200 < w \leq 400$	M1	for $(20 + 1) \div 2$ or identification of the 10th to 11th value
		A1	accept 200 - 400
11c	(£)430	M1	for mid value $\times f$ (at least three correct) (= $500 + 1800 + 500 + 4900 + 900 = 8600$)
		M1	for "8600" $\div 20$
		A1	

Question	Topic	Step	Marks
1a	Mode from frequency table	6th	1
1b	Median from frequency table	6th	1
1c	Range from frequency table	6th	2
1d	Mean from frequency table	6th	3
2	Mean, median, mode & range problem	8th	3
3a	Median from stem and leaf	7th	1
3b	Median from stem and leaf	7th	1
3c	Median from stem and leaf	7th	1
3d	Mode from stem and leaf	7th	1
3e	Range reasoning	7th	2
4a	Draw stem and leaf	6th	3
4b	Probability from stem and leaf	6th	2
5a	Angle in pie chart	6th	2
5b	Reasoning about angle in pie chart	6th	1
6	Reading from time series graph	6th	4
7	Mean problem	8th	3
8a	Frequency polygon	6th	2
8b	Work out percentage use frequency polygon	4th	2
9a	Plot points on scatter graph	7th	1
9b	Type of correlation	7th	1
9c	Predict from scatter graph	7th	2
9d	Reasoning from scatter graph	7th	1
10	Two-way table inferences	6th	4
11a	Frequency and median	7th	1
11b	Frequency and median	7th	2
11c	Frequency and median	7th	3

Marks to Steps conversion table

The table below converts marks to a step on the Pearson progression scale. For more information on the progression service please see the [progression website](#).

Mark boundary	Step
0	U
1–3	3rd Step
4–8	4th Step
9–18	5th Step
19–28	6th Step
29–37	7th Step
38–50	8th Step