Statistics Foundation
GCSE Mathematics

Starters

The Median

5

(1)

Frequency Table

Height h in cm	Tally	Frequency
$155 \leq h < 160$		6
$160 \leq h < 165$		4
$165 \leq h < 170$		8
$170 \leq h < 175$		5
$175 \leq h < 180$		1

(2)

Line Graph

No. of games 3 + 5 + 1 + 0 + 4 = 13

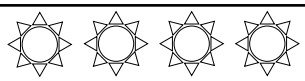
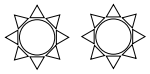
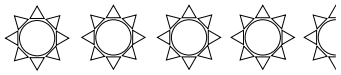
(1)

The Mode

1

(1)

Pictogram

May	
June	
July	
August	

Key 4 days

(2)

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Main Course

Shopping bags

$$\frac{1 \times 3 + 2 \times 5 + 3 \times 4 + 4 \times 2 + 6 \times 1}{3 + 5 + 4 + 2 + 1}$$ (1)

= 2.6 no. of bags (1)

% reduction 1.4 ÷ 4 x 100 = 35% (1)

Only small sample of 15 so not very accurate (1)

Larger sample size to get a better representation of the population (1)

Two Way Table (4)

	Can tie laces	Cannot tie laces
Under 7	6	18
Over 7	10	2

Average Wage

x + 2x + 2x – 20 + x + 20 + 3x = 540 (1)

9x = 540 x = 60 (1)

Ben £60, Jen £120, Len £100, Ken £80, Tom £180 (1)

Range £120 (1)

Selling Houses

1550 ÷ 62 = £25 (1)

360 x 25 = £9,000 (1)

Commission for house C 126/360 x 900 = £3,150 (1)

3150 ÷ 1.5 x 100 = £210,000 (1)

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The Bing Family	Mean is 36 and Median is 28.5	
	Ages increase by 10 years therefore mean age and median age will increase by same amount	(2)
	Range 45 unaffected as difference between oldest and youngest member remains the same	(1)

Dessert

Conducting a Survey	Only interviewing females	(1)
	Time conducted may not provide variation in customer type	(1)
Questionnaire	Giving an opinion can influence persons answer. What type of newspapers do you read?	(1)
	Tabloid or Broadsheets?	(1)
Calculating the Mean	She has divided by the no. of groups rather than the total no. of classes (20)	(1)
	50 ÷ 20 = 2.5 pupils	(1)
Negative Correlation	Graph shows as one variable increases the other decreases E.g. Value and age of car	(1)
Working with the mean	We know mean = total ÷ no. 16.40 = total ÷ 5	(1)
	5 x 16.40 = £82	(1)
The Mode	The mode is 1.	(1)
	9 is the frequency and this shows that 1 has occurred the most	(1)

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Drinks

Rajs Earnings

360 ÷ 1440 = 0.25˚ (1)

Rent	540 x 0.25 = 135˚
Bills	360 x 0.25 = 90˚
Food	180 x 0.25=45˚
Leisure	270 x 0.25 = 67.5˚
Savings	90 x 0.25 = 22.5˚

(2)

Questions

Relevant questions (1 mark for each) (3)

E.g. Do you use the cafeteria?

How often do you use the cafeteria?

Finding Data

Total 35

4, 6, 6, 6, 13 (2)

Find the Median

Median age is 8 (2)

Scatter Graph

Appropriate Scale (1)

Points plotted correctly (1)

Line of best fit drawn by eye (1)

Time Series

Appropriate Scale (1)

Plotted correctly and joined by straight line (1)