



Mathematics lesson 2 – Answer sheet

Footfall:

Question 1 a. Market:

- Range: 110
- Mean: 140
- Mode: 120
- Median: 135
- Upper Quartile: 160
- Lower Quartile: 120

b. Shopping Centre:

- Range: 90
- Mean: 394
- Mode: 350
- Median: 395
- Upper Quartile: 420
- Lower Quartile: 370

Question 2 Age:

a. Market:

- Range: 10
- Mean: 29.6
- Mode: No mode (no repeated values)
- Median: 29.5
- Upper Quartile: 32
- Lower Quartile: 27

b. Shopping Centre:

- Range: 9
- Mean: 40.5
- Mode: No mode (no repeated values)
- Median: 40.5
- Upper Quartile: 43
- Lower Quartile: 38

Question 3 Salary breakdown:

a. Market:

- Estimated mean: $\pounds(18,000+28,000)/2 = 23,000$
- Mode: $\pounds10-20,000$
- Median: $\pounds20-30,000$

b. Shopping Centre:

- Estimated Mean: $\pounds(23,000+33,000)/2 = 28,000$
- Mode: $\pounds20-30,000$
- Median: $\pounds20-30,000$

Salary Breakdown

Market

$\pounds10,000 - \pounds20,000$	45%	621	15	9315
$\pounds20,000 - \pounds30,000$	35%	438	25	12075
$\pounds30,000 - \pounds40,000$	15%	207	35	7245
$\pounds40,000 - \pounds50,000$	5%	69	45	3105
	Total	1380	Total	31740

$$\text{Mean} = 31740/1380 = \pounds23,000$$

Shopping Centre

£10,000 - £20,000	20%	790	15	11850
£20,000 - £30,000	40%	1580	25	39500
£30,000 - £40,000	30%	1185	35	41475
£40,000 - £50,000	10%	395	45	17775
	Total	3950	Total	110600

$$\text{Mean} = 110600/3950 = \text{£}28,000$$

Discuss:

1. Which would you allocate to the weekend market?

There is no right or wrong answer here, but generally students should be looking at the average age and salary and see that people generally spend less in the market so look at goods that have a lower price, for example pick'n'mix sweets.

2. What data would you use to justify our decision?

Again, there is no right or wrong answer here, but students could justify their answers using the mean number for age and salary.

