

Delta 1

Unit 1 Review (Calculator Allowed)

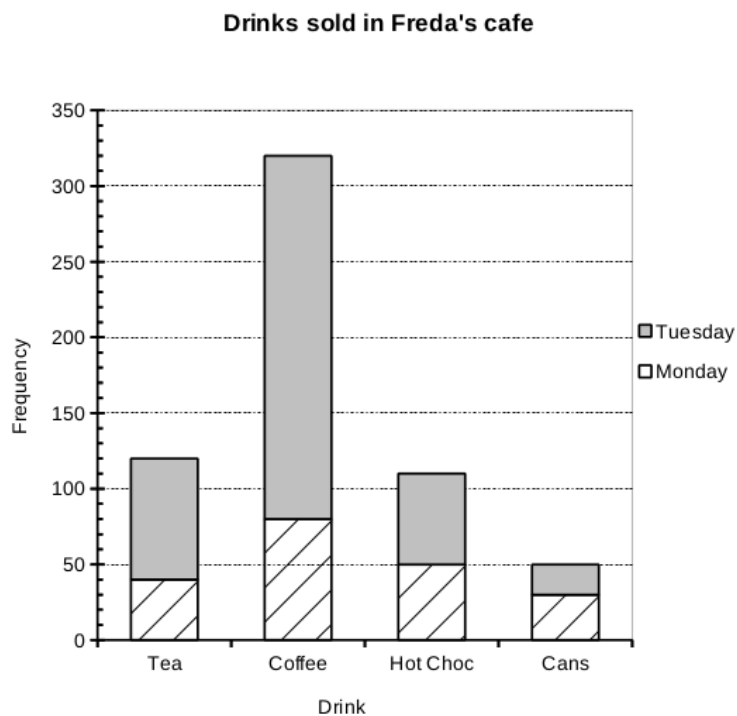
Analysing and Displaying Data

How well did you do:

Analysing and Displaying Data	Score = $\frac{\quad}{36}$	
-------------------------------	----------------------------	--

<i>Topics/skills which need to be revisited:</i>	<i>Questions from the Review</i>	<i>Further Practice from Delta 1</i>
• Use two-way tables • Interpret compound bar charts	• 2 • 1	• P20 Q1a, 2a,b • P20 Q1b, 2c
• Choose the most appropriate average for a set of data • Find the range and mean from a frequency table • Compare sets of data using averages and the range	• 5 • 3a,b • 3c	• P27 Q4 • P5 Q4 • P19 Q2
• Group continuous data • Find the modal class of grouped data • Draw and interpret grouped frequency diagrams	• 7a • 7b • 7c	• P21 Q5a • P21 Q5b • P21 Q5c
• Interpret and draw line graphs	• 6	• P22 Q2
• Draw a pie chart	• 4	• P21 Q4
• Interpret and draw scatter graphs • Describe the correlation between sets of data • Draw a line of best fit and use it to estimate values	• 8a • 8b • 8c, 8d	• P22 Q3a • P22 Q3b • P22 Q3c, d

1. Freda has opened a new café and is interested in how many drinks she is selling and what type. Here is her data from the first two days of business:



- a. What is the name given to this type of bar-chart?

.....
[1]

- b. On Monday, which is more popular from the choice of tea or cans?

.....
[1]

- c. How many more coffees are sold on Tuesday compared with Monday?

.....
[3]

(Total 5 marks)

2. This partly-completed table shows the favourite sport in a small sports club:

	Athletics	Basketball	Football
Male	11	15	20
Female	15	16	23

- a. How many males are there in the club?

.....

[1]

- b. The manager thinks that basketball is more popular with females than with males. Is he correct?
You must fully justify your answer.

.....

.....

.....

.....

[3]

(Total 4 marks)

3. The 20m multistage fitness test (MSFT) is a commonly used maximal running aerobic fitness test. It is also known as the 20 metre shuttle run test, beep or bleep test among other names. This test involves continuous running between two lines 20m apart in time to recorded beeps.

The frequency table below shows the beep test fitness results for the eighty-five DC teachers in June. The number of teachers who finished at each level was recorded.

Level	Frequency	
5	29	
6	13	
7	8	
8	17	
9	18	

- a. What is the range of the staff's level of fitness?

.....

[1]

- b. Work out the mean level of fitness. (You may use the extra blank column in the table if it helps)

.....

[3]

- c. Before the summer holidays, Mr Jones sent all staff an email about the new DC Fitness Standards and the beep test was repeated again in September. Here are the summary statistics:

Range	Mean
3	7.2

Compare the results in June and September, using all summary data and interpreting them in the context of the situation.

.....

.....

.....

.....

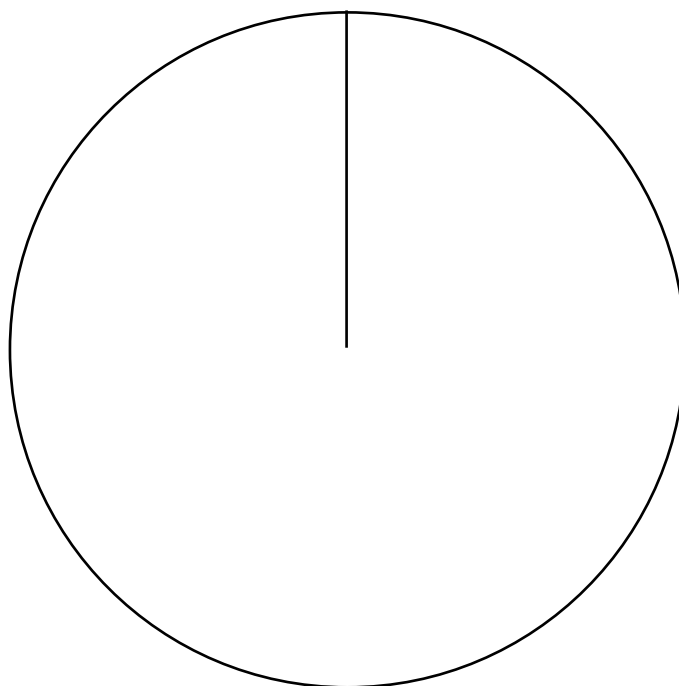
.....

[3]

(Total 7 marks)

4. The table shows the Maths Society's favourite ice-cream flavour.
Draw a pie chart for the data.
(you must show working for the angles you calculate)

Flavour	Frequency
Salted Caramel	4
Chocolate	5
Cookies & Cream	7
Strawberry	2



(Total 4 marks)

5. Paul recorded the number of camels he saw each day in a week.

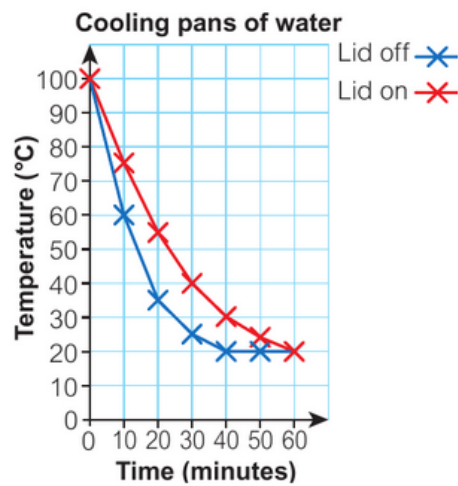
2, 32, 4, 2, 4, 0, 6

Which average should he use to best describe the data?

(Explain your answer clearly, justifying why the average you choose is better than the other two averages.)

(Total 2 marks)

6. Two pans of hot water recorded temperature



. One pan had a lid. The graph shows the

- a. What was the temperature of the water in the pan with the lid after 40 minutes?

[1]

- b. Write a sentence to compare the times it took the pans to reach room temperature.

[1]

- c. What was the difference in the temperature after 20 mins?

[2]

(Total 4 marks)

7. Here are the lengths of fifteen new labrador puppies, in cm.

39, 51, 56, 55, 40, 46, 45, 49, 36, 52, 46, 48, 37, 58, 43

a. Complete the tally chart for the data.

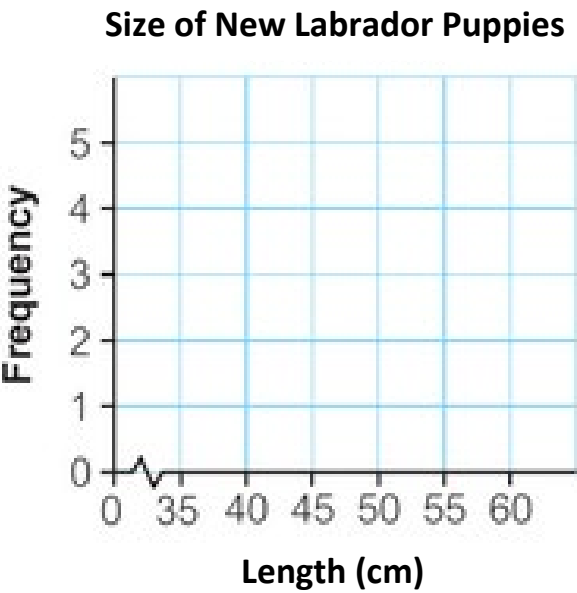
Length, L (cm)	Tally	Frequency
$35 \leq L < 40$		
$40 \leq L < 45$		
$45 \leq L < 50$		
$50 \leq L < 55$		
$55 \leq L < 60$		

[2]

b. What is the modal class?

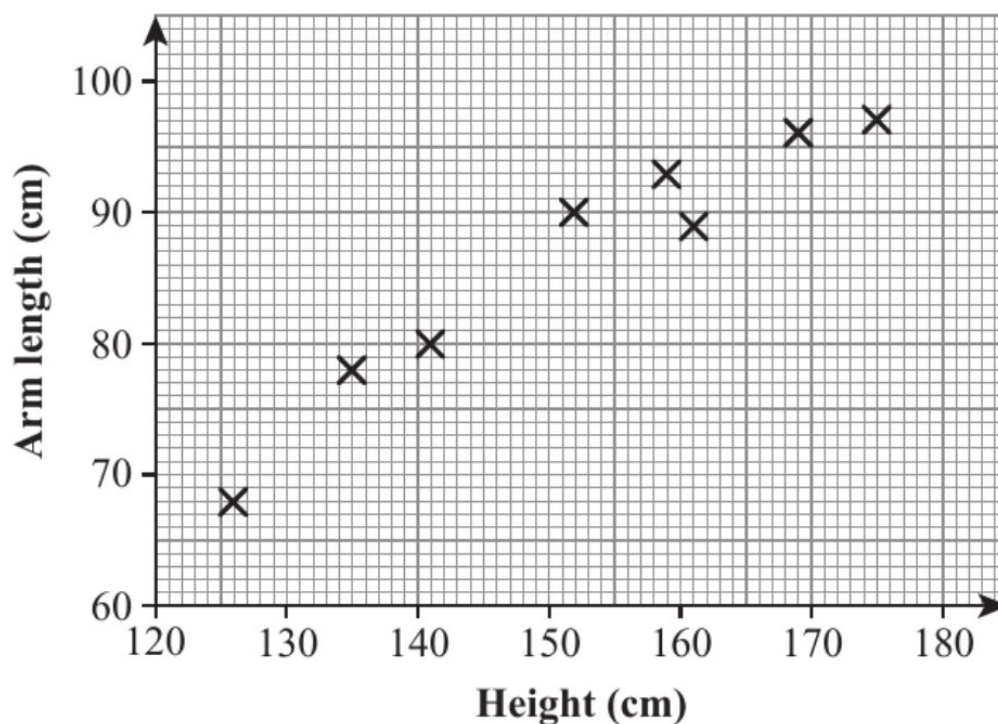
.....
[1]

c. Complete the frequency diagram below for the data.



[2]
(Total 5 marks)

8. The scatter graph below shows the arm length and height of some Year 11 students.



- a. One student is not on the graph. Add their data to the graph now:
Height 122cm. Arm length 68cm.

[1]

- b. Describe the correlation of the data.

..... [1]

- c. Draw on the line of best fit

[1]

- d. Estimate:

- i. the arm length of a student who is 146cm tall.

.....

- ii. the height of a student who has arm length of 75cm.

.....

[2]

(Total 5 marks)