Favourite Fruit

Shoppers in the supermarket were asked in a survey which was their favourite fruit. Here is a list of their responses.

Banana	Apple	Banana	Banana	Grape	Orange
Apple	Apple	Strawberry	Orange	Apple	Banana
Orange	Orange	Strawberry	Banana	Grape	Apple
Apple	Apple	Orange	Strawberry	Strawberry	Apple

Complete this Tally Chart and use this information about favourite fruits to fill it in. Then answer the questions below.

FRUIT	TALLY	TOTAL
Apple		
Banana		
Grape		
Orange		
Strawberry		

1) Which fruit was the most popular? _____.

2) Which fruit was the least popular? _____.

3) Which two fruits were preferred by the same number of people?

_____ and _____.

4) How many more people preferred Apples to Grapes? _____.

5) How many fewer people preferred Strawberries to Bananas? _____.

6) How many people were surveyed all together? _____.

7) Order the fruits from most popular to least popular? _____

_____

_____

_____

_____

Shoe Size

A children's shoe shop took a survey of their customers shoe size over one day. Here is a list of their responses.

4	2	2	2	1	3	1
2	2	3	4	1	2	3
2	2	1	1	3	1	3
5	1	2	3	4	2	1

Copy this Tally Chart into your jotter and use the list above to complete it.

Shoe Size	TALLY	TOTAL
Size 1		
Size 2		
Size 3		
Size 4		
Size 5		

Then use the information in the tally chart to answer the questions below in your jotters.

1) Which shoe size was most popular? _____.

2) Which shoe size was the least popular? _____.

3) What was the largest shoe size? _____.

4) What was the smallest shoe size? _____.

5) How many more children had size 2 shoes than had size 4 shoes? _____.

6) How many fewer children had size 5 shoes than size 1 shoes? _____.

7) How many customers did the shop have on the day of the survey? _____.

8) Order the shoe sizes from most popular to least popular? _____

_____

_____

_____

_____

Measures of average - mean, median and mode

Name :	Class :	Date :

WORKSHEET 1

Mark :	/10	%

1) Find the mean of the data given below. [1]

9 3 9 3

mean = ☐

2) Find the mean of the given data below, rounding your answer to the nearest whole number. [1]

17 20 24 22 29 15

mean = ☐

3) Find the mean of the given data below, rounding your answer to the nearest tenth. [1]

28.3 26.9 21.6 6.3 11.3 6.9 21.2 0.7

mean = ☐

4) Find the median of the data given below. [1]

20 18 12 16 22 15 21

median = ☐

5) Find the median of the data given below. [1]

25 10 20 25 17 16 10 30

median = ☐

6) Find the median of the data given below. [1]

14.2 1.4 25.9 12.9 24.1 17.9 15.7 0.1

median = ☐

7) Find the median of the data given below. [1]

1.9 16.3 20.9 13.1 16.3 23.2 11.3 8.5 17.7 10.2 18.4 0.8

median = ☐

8) Find the mode of the data given below. [1]

6 1 8 5 3 6 2 10 12 4

mode = ☐

9) Find the mode of the data given below. [1]

7 2 3 9 8

mode = ☐

10) Find the mode of the data given below. [1]

2 7 5 5 7 6

mode = ☐

Solutions for the assessment Measures of average - mean, median and mode

1) Mean = 6

2) Mean = 21

3) Mean = 15.4

4) Median = 18

5) Median = 18.5

6) median = 14.95

7) median = 14.7

8) mode = 6

9) mode = none

10) mode = 5,7

Measures of average - mean, median and mode

Name :	Class :	Date :

WORKSHEET 2

Mark :	/10	%

1) Find the mean of the data given below. [1]

5 5 6 3 1

mean = ☐

2) Find the mean of the given data below, rounding your answer to the nearest whole number. [1]

11 18 13 19 11 16 23 21

mean = ☐

3) Find the mean of the given data below, rounding your answer to the nearest tenth. [1]

28.4 18.7 23.3 23.9 19.2 5.5 17.2 22.8 0.6

mean = ☐

4) Find the median of the data given below. [1]

25 28 14 18 18 24 18 30 11

median = ☐

5) Find the median of the data given below. [1]

22 20 13 27 13 22 18 10

median = ☐

6) Find the median of the data given below. [1]

29.1 12.7 14.9 17.3 25.6 6.1 23.2 0.1

median = ☐

7) Find the median of the data given below. [1]

10.5 10.7 12.9 22.6 23.7 8.9 8.4 9.5 20.3 0.2

median = ☐

8) Find the mode of the data given below. [1]

1 10 5 3 6 12 2 11 3 7

mode = ☐

9) Find the mode of the data given below. [1]

6 1 9 3

mode = ☐

10) Find the mode of the data given below. [1]

1 1 9 2 5 5 3 6

mode = ☐

Solutions for the assessment Measures of average - mean, median and mode

1) Mean = 4

2) Mean = 17

3) Mean = 17.7

4) Median = 18

5) Median = 19

6) median = 16.1

7) median = 10.6

8) mode = 3

9) mode = none

10) mode = 5,1

LEVEL 1

Emily sold a strip of 5 tickets for £1 or 1 individual ticket for 30p.

She kept a record of the tickets that she sold.

Tickets	Tally	Frequency
Strip of 5 tickets	𝍸 𝍸 𝍸 𝍸 III	23
Individual tickets	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	35
	Total tickets sold	**58**

3g Emily knows that she sold 150 tickets! **(2 marks)**

Explain why Emily's table is incorrect.

Tony is going to order pizza for the party.

He asks the staff and students what type of pizza they would like.

He records their answers in the tally chart below:

Pizza	**Tally**
Pepperoni	𝍸 𝍸 𝍸 ||||
Cheese	𝍸 𝍸 𝍸 |||
Ham and Pineapple	𝍸 𝍸 𝍸 𝍸

Three students were absent.

When the students returned, Tony asked them which pizza they would like.

One student asked for pepperoni

Two students asked for ham and pineapple.

3d. Add these students to the tally chart above. **(2 marks)**

3e. How many of each Pizza were ordered:

Pepperoni Pizza's : _____

Cheese Pizza's : _____

Ham and Pineapple Pizza's : _____

(2 marks)

3f. How many Pizza's were ordered in total:

_____

(1 mark)

LEVEL 2

The manager of the stall sets a sales target for next Saturday.
She wants to sell 50% more drinks than the average sales for the last four Saturdays.

The table below shows the drink sales for the last four Saturdays.

Date (Saturday)	27 July	03 August	10 August	17 August
Cold drink sales	66	97	123	174
Temperature (°C)	17	18	22	28

Work out the mean of the drink sales for the last four Saturdays.

Work out the sales target for tomorrow.

Mean sales for the last four weeks _____

Sales target for tomorrow _____

(6 Marks)

A cosmetics company carries out a survey.
Volunteers try the hand wash and give it a score on a scale of 1 to 10 for the following three categories

- design of bottle
- fragrance
- hands feel clean.

Volunteer	Score for each survey question 1 = strongly disagree 10 = strongly agree		
	I like the design of the bottle	I like the fragrance (smell)	I like how clean my hands feel
A	4	6	7
B	3	7	9
C	6	6	8
D	3	8	6
E	6	8	9
F	3	6	7
G	4	10	6
H	3	2	6
I	4	9	9
J	6	6	10
K	6	10	9
L	6	6	10

Find the **Mean** of the:

Design of bottle_____

Fragrance_____

Hands feel clean_____

Find the **Median** of the:

Design of bottle_____

Fragrance_____

Hands feel clean_____

Find the **Mode** of the:

Design of bottle_____

Fragrance_____

Hands feel clean_____

2E

Find the range in scores for the new hand wash for

- design of bottle
- fragrance
- hands feel clean.

Show your working

Design of bottle _____

Fragrance _____

Hands feel clean _____

(3 marks)

Explain why the <u>mean</u> would be a good indicator for the company to analysis their survey?

Explain why the <u>median</u> would be a good indicator for the company to analysis their survey?

1C

The table below shows the price list for the show.

Ticket type	Seats				
	Rows A – C (ie A, B and C)	**Rows D – H**	**Rows I – L**	**Rows M – Q**	**Rows R – T**
Adult	£20.00 per person	£17.00 per person	£15.00 per person	£12.00 per person	£10.00 per person
Child (< 12 years)	15% discount (off the adult price)				
Family (2 adults + 2 children)	£70.00	£65.00	£60.00	£55.00	£50.00
Pensioner	£10.00				

On a family day out 2 Pensioners, 2 adults and 2 children, aged 6 and 11, want to sit in the **Row P seats.**

What is the price of the tickets if bought individually or bought with a family ticket? Compare the costs and explain your answer.

Show your working

(5 marks)