Handling Data and Probability

1. Here is a table showing percentages of votes in a school Talent Show final and the predictions of some students.

Students	Magician Mike (%)	Dancing Dana (%)	Comedy Colin (%)	Magician Mike's lead over Dancing Dana (%)
Aaron	51	45	4	6
Kaleb	45	20	35	25
Lizzie	46	37	17	9
Suzi	42	41	17	1
Sasha	35	35	30	0
Tyrone	50	20	30	30
Actual Result	**44**	**37**	**19**	**7**

(a) Which student correctly predicted Dancing Dana's vote?

(b) Which student was closest in predicting Magician Mike's vote?

(c) Which student was closest to predicting Magician Mike's lead over Dancing Dana?

(d) Represent the actual result of the school Talent Show on a bar chart.

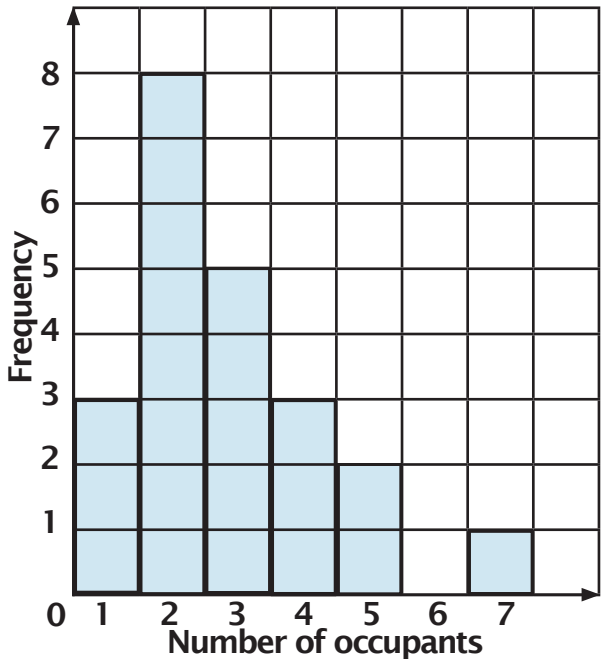
2. Eggs are sorted into size by weight. The weight is then converted into an egg size. The sizes range from 1 to 7.
Here are the weights of eggs (in grams) produced by a farmer's chickens:

65,	56,	62,	69,	64,	51,	53,	57,	60,	59,
45,	59,	50,	57,	54,	58,	53,	59,	55,	58,
56,	46,	55,	44,	61,	55,	52,	70,	60,	56,
70,	66,	62,	42,	49,	63,	50,	57,	64,	72.

Copy and complete this table:

Weight (grams)	Size	Tally	Frequency
Under 45	7		
45 – 49	6		
50 - 54	5		
55 - 59	4		
60 - 64	3		
65 - 69	2		
70 or over	1		

3. In a survey, the number of occupants in the cars passing a school was recorded.



(a) How many cars had 4 occupants ?

(b) How many cars had more than 3 occupants ?

(c) How many cars were in the survey ?

(d) What number of occupants was observed most often ?

4. 6 3 7 4

The above scores are awarded by four judges in a diving contest.

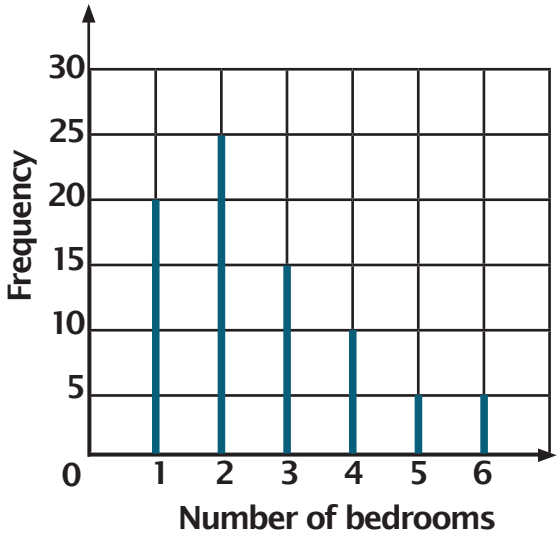
(a) Find the mean score.

(b) Find the median score.

(c) Write down the range of scores.

5. This bar line graph shows the number of bedrooms in the houses in one road.

Number of bedrooms in the houses in one road.



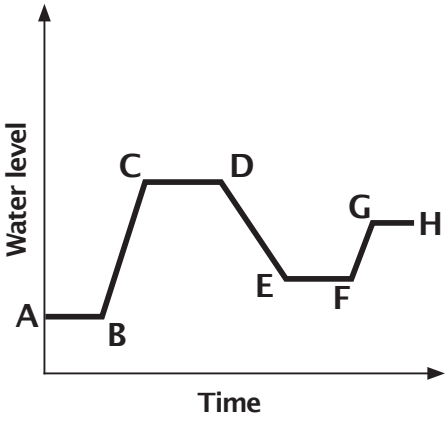
(a) How many houses had 4 bedrooms ?

(b) How many houses are in the road ?

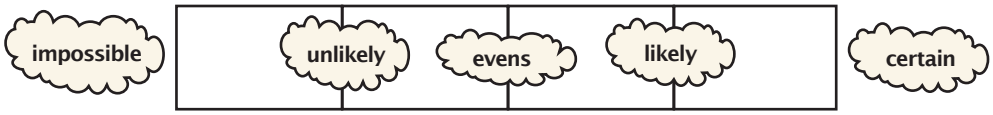
(c) Why would it not be sensible to join the tops of the bars to make a line graph ?

6. Some keen gardeners collect rain water from the roofs of their homes into rain barrels. They use the water from the barrel when the ground is dry to save using tap water. Look at this graph and write down what you think is happening. Use the labels A, B, C ...

Level of water in barrel over time.



7. This scale shows the probability of events occurring:

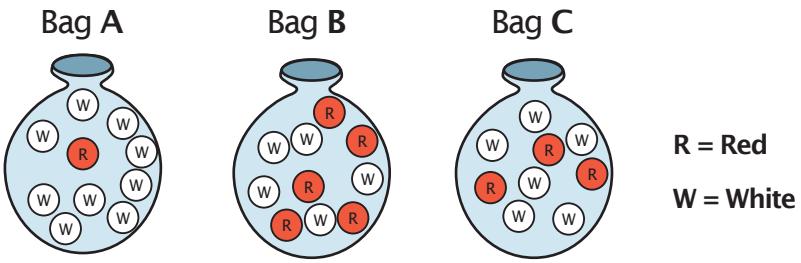


Here are four events:

a You will have contact with water today.
b You will not see a red car tomorrow.
c A coin is tossed and it comes down tails.
d You will be kidnapped by aliens going home from school in 10 years' time.

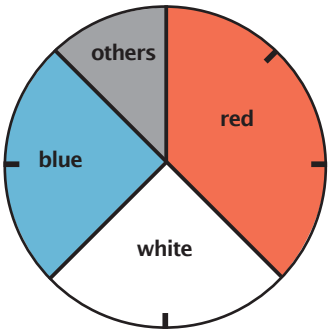
Copy the scale and mark 4 arrows on it indicating where you would expect **a**, **b**, **c**, and **d** to be.

8. Karen is going to play a game called 'Lucky Dip'. There are three bags labelled A, B and C. Each bag contains red and white balls. You win if you draw out a red ball from a bag.



(a) Write down the probability of winning from bag A, from bag B, and from bag C.
(b) Which bag is Karen most likely to win from? Give a reason for your answer.

9. The pie chart shows the most popular colours of cars after a survey.



There were 80 cars in the survey.

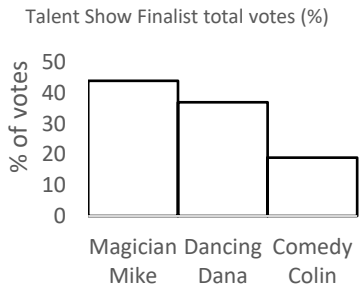
(a) How many cars were red ?

(b) How many cars were blue or white ?

(c) How many cars were not red, white or blue ?

KS2 Handling Data & Probability Answers

1. (a) Lizzie (b) Kaleb (c) Aaron (d)

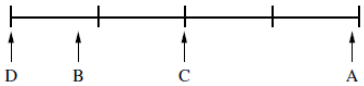


2. Frequencies: 2, 3, 7, 14, 8, 3, 3 **3.** (a) 3 (b) 6 (c) 22 (d) 2 **4.** (a) 5 (b) 5 (c) 4

5. (a) 10 (b) 80 (c) You cannot have $\frac{1}{2}$ bedrooms

6. A → B no rain, B → C rain, C → D rain stops, D → E water used, E → F stop watering, no rain, F → G more rain, G → H stops raining

7.



8. (a) Bag A $\frac{1}{10}$, Bag B $\frac{1}{2}$, Bag C $\frac{1}{3}$ (b) Bag B

9. (a) 30 (b) 40 (c) 10