

SCORE

# Data & Measurement

With Classified  
answer book

8

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## 7- Displaying Data

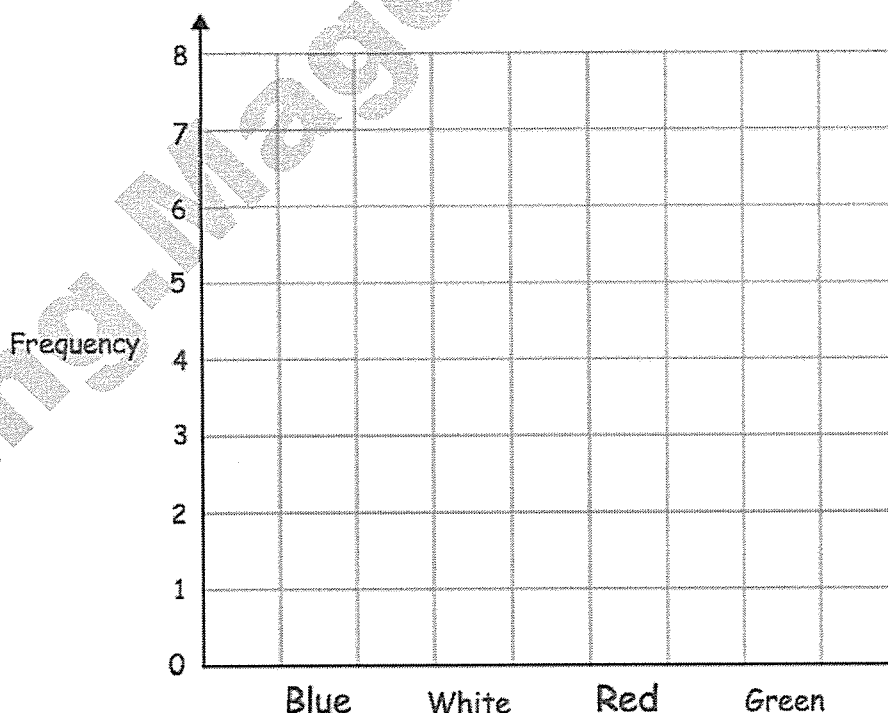
1. James asked his friends their favourite colour.

Green   Blue   Red                  Green      Blue      Blue  
 Green   Red    Blue                  White     Blue     Green  
 Red     Green   Blue                  Red        Blue     Green

(a) Complete the frequency table for his results.

Colour	Tally	Frequency
Blue		
White		
Red		
Green		

(b) On the grid, draw a bar chart to show this information.



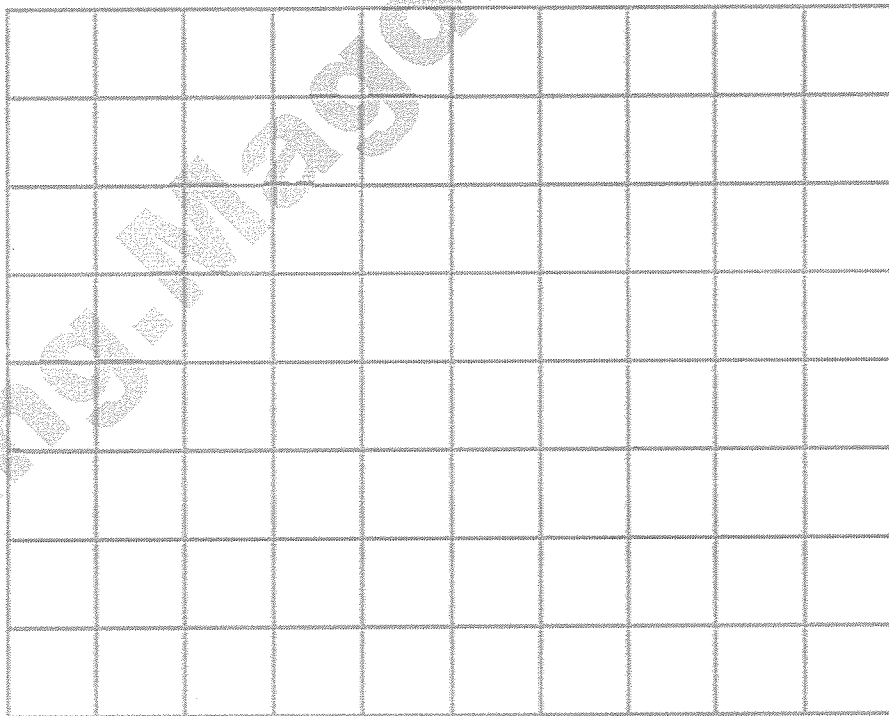
2. A group of students were asked their favourite subject.

Here are their replies.

Maths	Art	Science	English	Art
Maths!	English	Science	Art	English
Maths	Maths	Art	Maths	Science

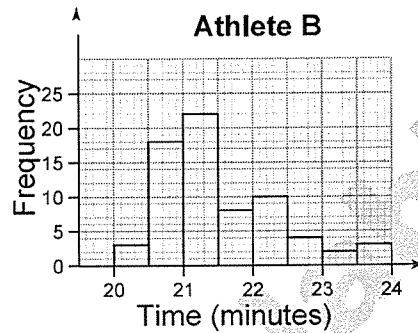
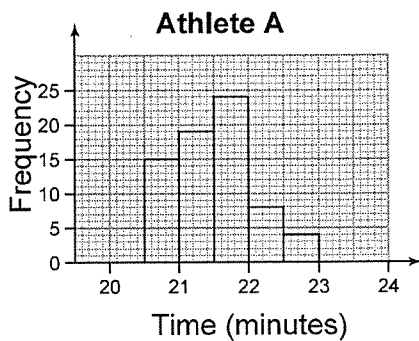
(a) Show this information in a tally chart.

(b) Draw a bar chart to show this information.



3 Ravi trains two athletes.

He records the times they take to complete a race at each training session. The frequency diagrams show the two athletes' times.



a) Compare the modal classes for two athletes.

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Ravi has to select one of the athletes to take part in a competition. He decides to pick the athlete that has the better chance of running the race in under 22 minutes.

b) Which of the two athletes should Ravi pick?

Athlete A  Athlete B

4. The table shows the items sold in a school shop in one week.

	Mon	Tue	Wed	Thu	Fri
Pencil	25	18	13	21	16
Pen	17	20	19	9	12
Ruler	5	1	2	6	8
Protractor	5	1	4	3	2
Compasses	5	1	2	1	0

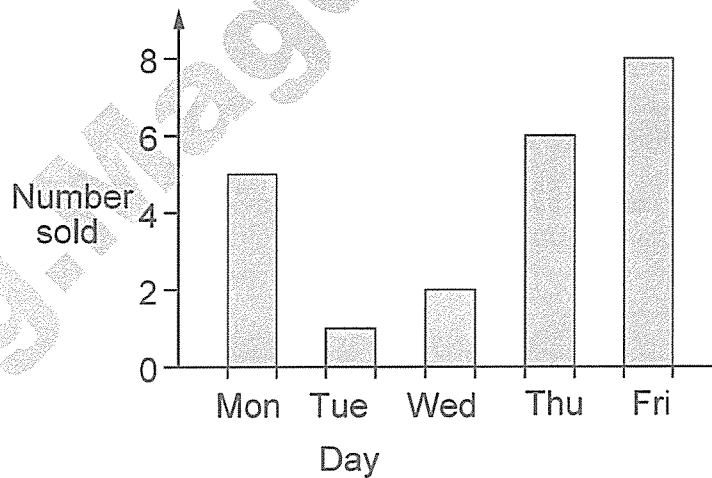
(a) How many pens were sold in the shop on Wednesday?

\_\_\_\_\_

(b) On what day did the shop sell 2 protractors?

\_\_\_\_\_

(c) The bar chart shows information for one of the items.



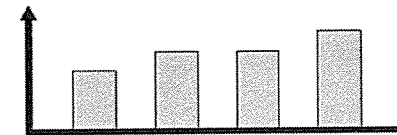
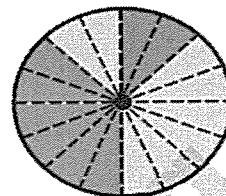
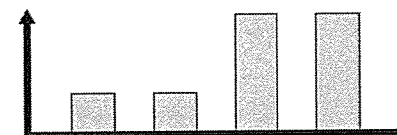
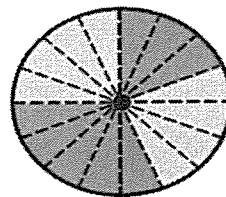
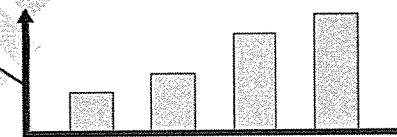
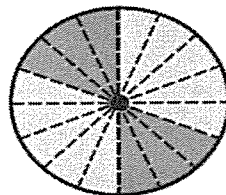
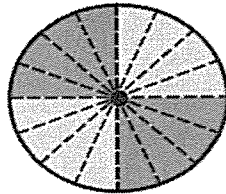
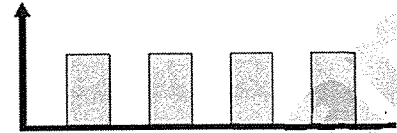
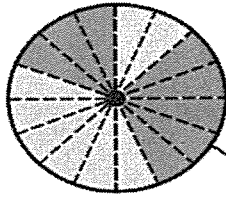
Which item is this?

\_\_\_\_\_

5. Each of these pie charts shows the same information as one of the bar charts.

Draw lines to match each pie chart with the bar chart that shows the same information.

The first is done for you.



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6 A baker's shop sells brown (B), white (W), wholemeal (M) and soda (S) bread.

It keeps a record of the types of loaves it sells. The data is shown below.

B	B	W	W	W	M	B	W	M	S
B	B	B	W	M	W	M	B	M	B
S	W	W	B	B	W	M	M	M	M
B	M	M	W	M	W	B	S	M	M

a) Construct a tally and frequency table of the results.

b) Draw a pictogram of the results.

c) Draw a bar-line graph of the results.

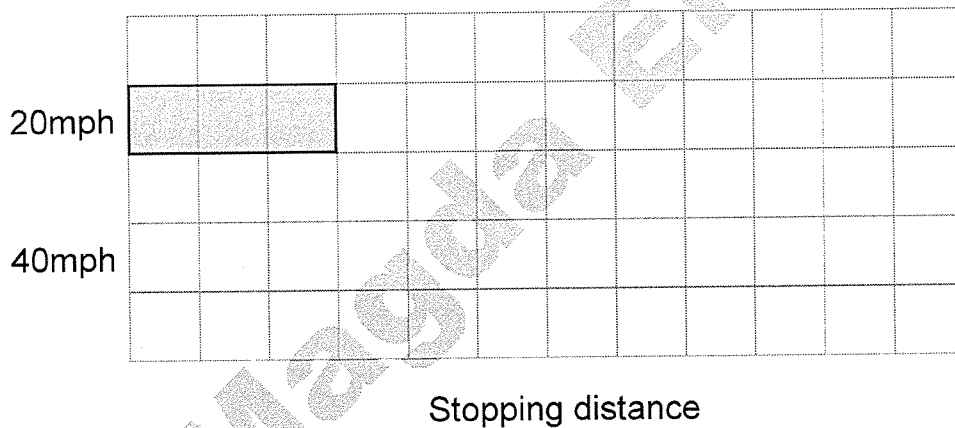
7. The table shows the stopping distances for a car at different speeds.

Speed	Stopping distance
20mph	12 metres
40mph	36 metres
60mph	72 metres

- (a) Look at the square grid below.

It shows the bar for the stopping distance at 20mph.

Use the same scale to draw the bar for the stopping distance at **40mph**.



- (b) The bar for the stopping distance at 60mph will not fit on the grid.

How many squares long should the bar be?



8. The table shows how many people visit a museum in five weeks.

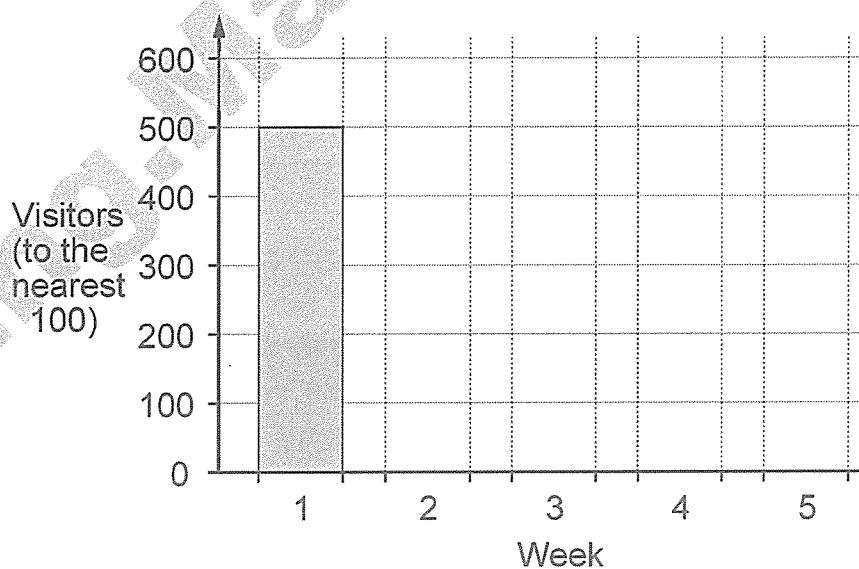
Week	Number of visitors	Rounded to the nearest hundred
1	453	500
2	328	
3	557	
4	299	
5	356	

- (a) Complete the table above by rounding each number to the nearest hundred.

The first one is done for you.

- (b) Now use the rounded values to complete the bar chart below.

The first bar is done for you.



- 9 Ahmed has two bags each containing four balls.  
The balls in bag A are numbered 1, 3, 5 and 6  
The balls in bag B are numbered 2, 3, 4 and 6

Ahmed picks a ball at random from each bag.  
He adds together the numbers on the two balls to get a total score.

Show that  $P(\text{total score is even}) = P(\text{total score is more than } 8)$ .  
You may use the table to help you.

		Bag A			
		1	3	5	6
Bag B	2	3			
	3			8	
	4				10
	6				
	6				

- 10 Lily is trying to find out if boys or girls scored generally higher marks in a test.  
She decides to find the mode, the mean and the range for each group.  
Here are the results of her calculations.

	Boys	Girls
Mode	52	
Mean	38.4	41.2
Range	40	

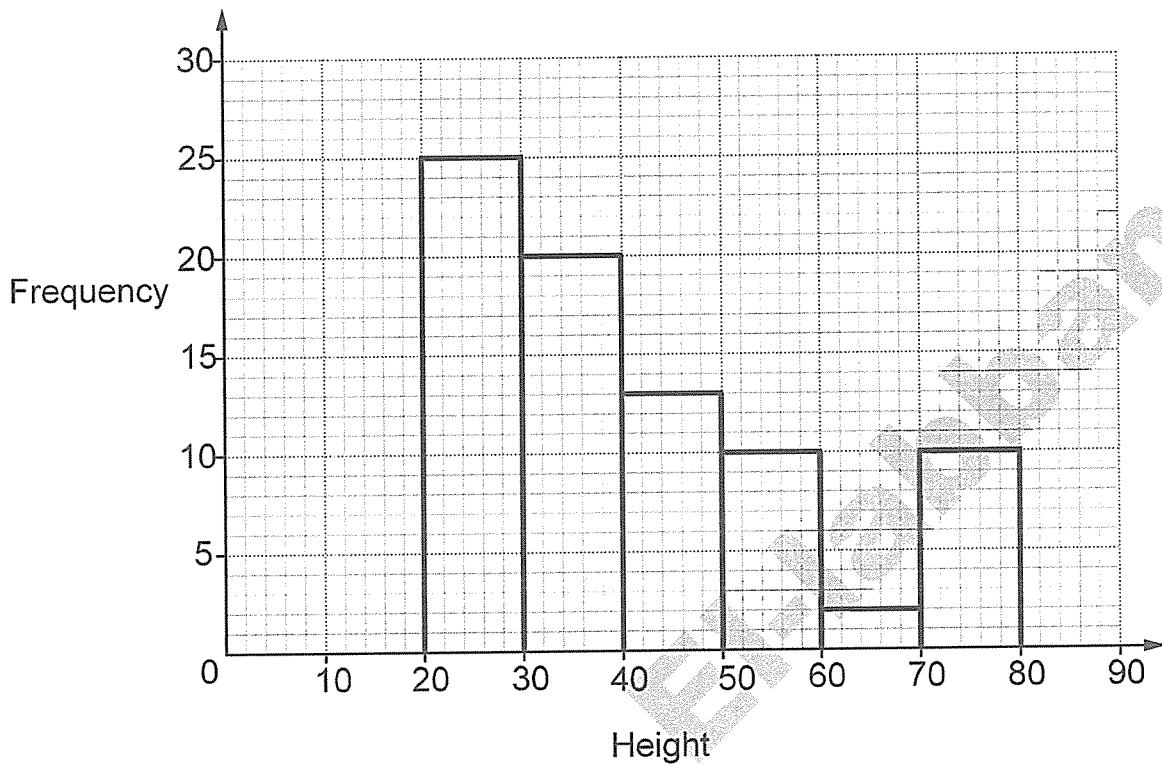
Put a tick (✓) next to the group with the generally higher marks.

Boys

Girls

Explain your answer.

11 This chart shows information about the heights of 80 plants.



The mean height is 41.9 cm. (cm)

Tick (✓) the correct statement.

The median height and the mean height are the same.

The median height is more than the mean height.

The median height is less than the mean height.

You cannot tell if the median height is less than, more than or the same as the mean height.