

WA6MPSS1

Statistics

Core + Challenge

Reading Data Displays

I can read column graphs, dot plots and line graphs and describe data using mode, range and shape.

Name: _____ Date: _____ Score: _____ / 58

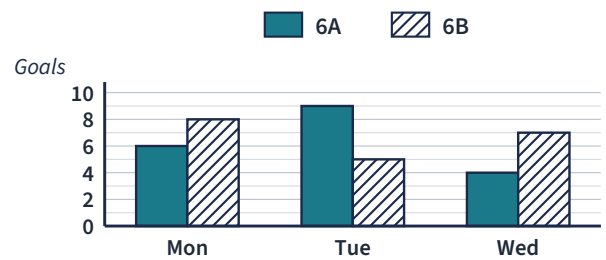
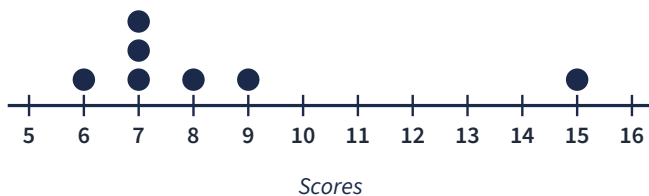
Key idea

Mode: the value that appears **most often**. **Range** = highest value – lowest value (how **spread out** the data is).

Shape: are the values **clustered** or **spread out**? Is there a **peak**, a **gap** or an **outlier** (a value far from the rest)?

A **side-by-side column graph** puts two groups next to each other to **compare** them. Read the **key** and the **scale**.

Example: 6, 7, 7, 7, 8, 9, 15. Mode = 7. Range = $15 - 6 = 9$. Most values cluster around 7; 15 is an outlier.



A

Warm up *read the graphs*

/ 16 marks

Find the mode or the range. 1 mark each.

1 **Mode** of 3, 5, 5, 7, 8, 5, 2

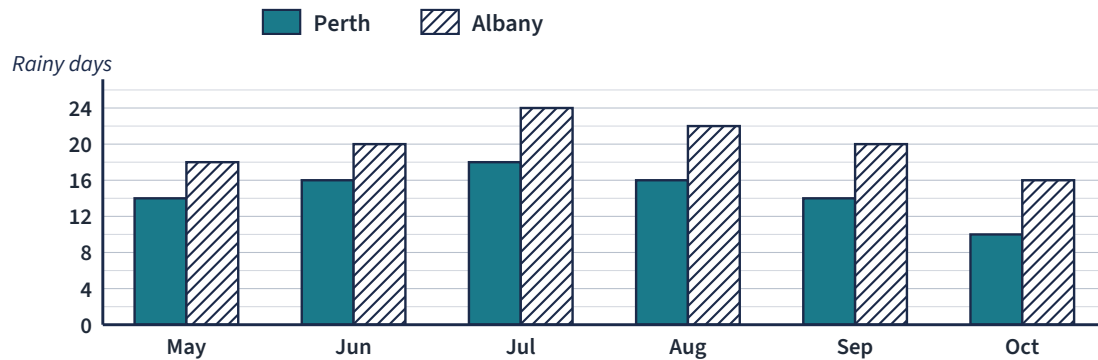
2 **Range** of 3, 5, 5, 7, 8, 5, 2

3 **Mode:** apple, banana, apple, mango, banana, apple

4 **Range** of these temperatures (°C): 31, 38, 35, 29, 40

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The graph shows the number of rainy days in Perth and Albany. 1 mark each.



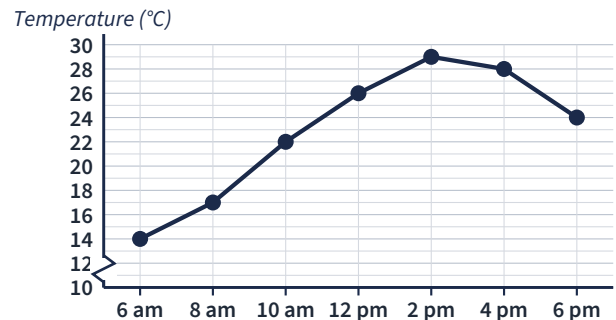
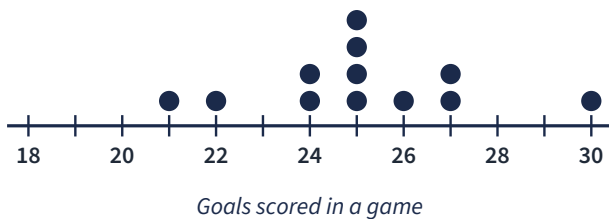
5 Rainy days in **Perth** in July?

6 The rainiest month in **Albany**?

7 October: how many **more** in Albany?

8 **Range** of Perth's rainy days?

The **dot plot** shows the goals a netball team scored in each game (questions 9 to 12). The **line graph** shows the temperature in Perth on one summer day (questions 13 to 16). 1 mark each.



9 Dot plot: how many games?

10 Dot plot: the **mode**?

11 Dot plot: the **range**?

12 Dot plot: games with **more than** 25 goals?

13 Line graph: temperature at 10 am?

14 Line graph: the **hottest** time?

15 Line graph: rise from 6 am to 12 pm?

16 Line graph: the biggest rise was between which times?

B

Practise *use the skill*

/ 23 marks

- 1 A class survey asked, “What is your favourite sport?” Draw a **side-by-side column graph** of the results. Follow the key: shade the boys' columns and stripe the girls' columns. Then write the **mode** for the boys and for the girls, and how many students were surveyed. [3 marks]

Sport	Boys	Girls
AFL	9	6
Netball	2	8
Soccer	7	5
Basketball	5	4

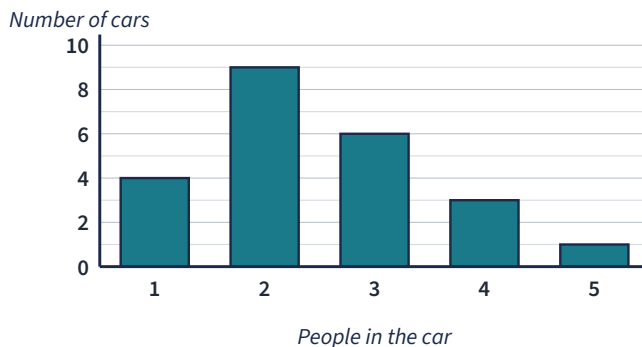
Boys' mode: _____

Girls' mode: _____

Total: _____

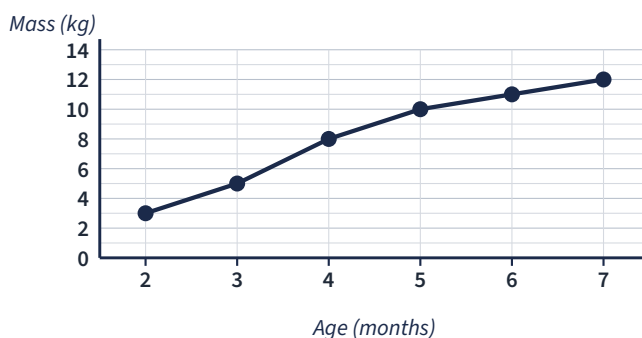


- 2 Kai counted the people in each car arriving at school. **a)** What is the **mode** number of people in a car? **b)** How many cars did he count? **c)** What is the range of the number of people? [2 marks]



Answer: _____

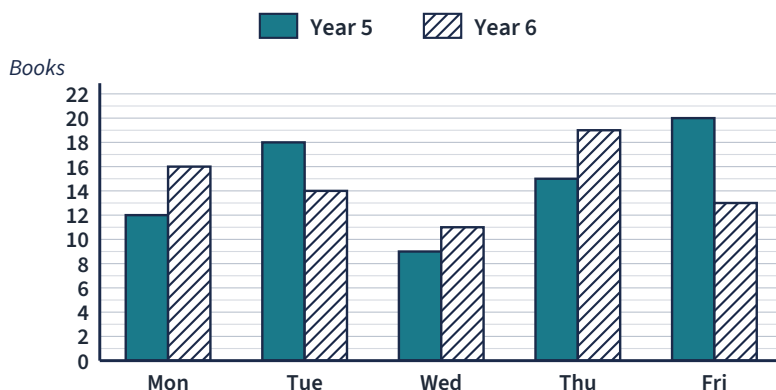
- 3 The graph shows the mass of Ella's puppy. **a)** What was its mass at 4 months? **b)** Between which two months did it gain the **most** mass? [2 marks]



Answer: _____

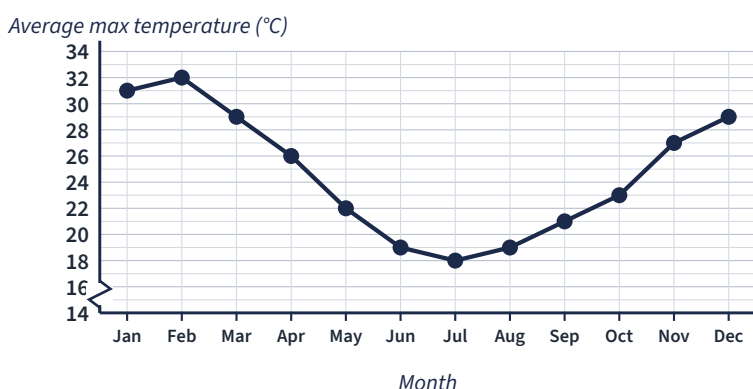
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- 4 The graph shows the library books borrowed by Year 5 and Year 6 in one week. [3 marks]
- a) On which days did Year 5 borrow **more** than Year 6? b) Which year group borrowed more books altogether? Show your working. c) Find the range for each year group. Which group's numbers were more spread out?



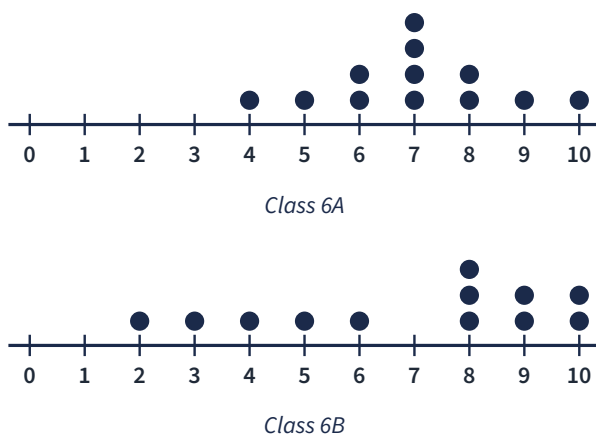
- a) _____
- b) _____
- c) _____

- 5 The graph shows Perth's average maximum temperature each month. a) Which month is the hottest? b) What is the range of the temperatures? c) Describe the shape of the graph. [3 marks]



- _____
- _____
- _____
- _____

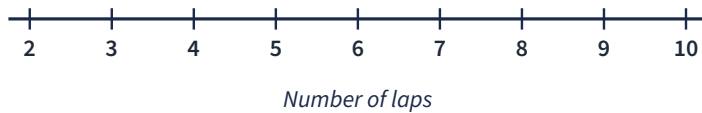
- 6 Two classes did the same spelling test (out of 10). a) Find the mode and range for each class. b) Which class's scores are more spread out? c) Which class do you think did better? Use the data to explain. [3 marks]



- 6A: _____
- 6B: _____
- b) _____
- c) _____

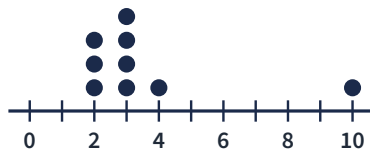
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- 7 Twenty students ran laps of the oval in 5 minutes. Their numbers of laps were: 5, 6, 7, 6, 8, 5, 6, 9, 4, 6, 7, 7, 6, 5, 8, 6, 3, 7, 6, 5. **a)** Draw a dot plot. **b)** Find the mode and the range. **c)** Describe the shape of the data. [3 marks]

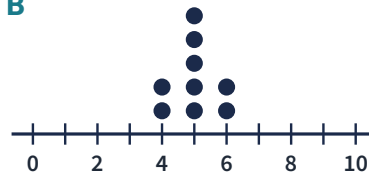


- 8 Match each dot plot to its description. Write the letter. [2 marks]

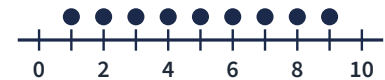
A



B



C



Clustered: _____ **Spread out:** _____ **Has an outlier:** _____

- 9 Scores from six AFL games are shown. Find the **range** for each team. Which team was **more consistent**? Explain. [2 marks]

Team	G1	G2	G3	G4	G5	G6
Dockers	85	92	70	101	88	76
Eagles	60	110	95	58	102	99

Answer: _____

C Think it through *explain your thinking*

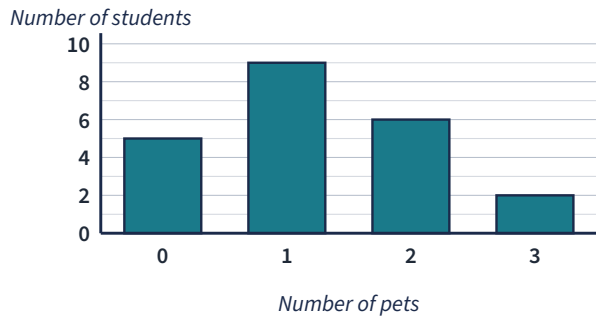
/ 10 marks

- 1 **True or false?** “Two data sets with the same range must have the same highest value.” Explain with an example. [2 marks]

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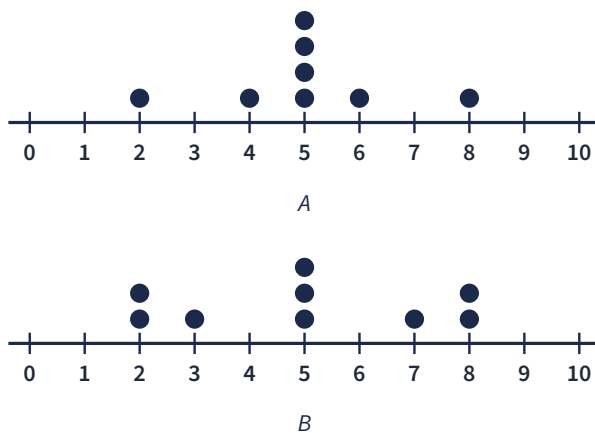
- 2 Jai looked at this graph and said, “The mode is **9**.” Do you agree with Jai? Explain.

[2 marks]



- 3 What is the **same** and what is **different** about these two dot plots?

[2 marks]



- 4 **Always, sometimes or never true?** “The mode is the largest number in a data set.” Give examples.

[2 marks]

Circle one: **Always** / **Sometimes** / **Never**

- 5 Which data set is the **odd one out**? Explain. **A** 3, 4, 4, 10 **B** 1, 4, 4, 8 **C** 5, 6, 6, 12 **D** 2, 4, 4, 9

[2 marks]

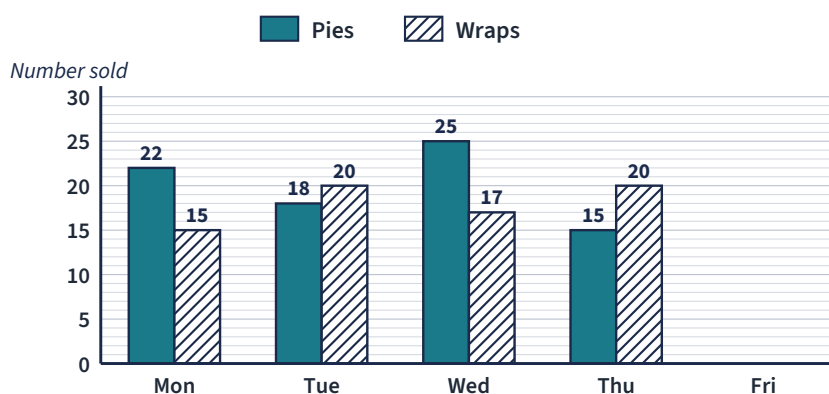
D**Challenge** *stretch yourself*

/ 9 marks

- 1 Five whole numbers have a **mode** of 6 and a **range** of 8. The smallest number is 3. **a)** What is the largest number? **b)** The five numbers add up to **30**. Find them. [3 marks]
Explain how you know there is only one answer.

Answer: _____

- 2 The canteen graph is missing **Friday**. Over the whole week, **100** pies and **95** wraps were sold. **a)** Draw Friday's two columns. **b)** On how many days did wraps outsell pies? **c)** What is the range of the daily pie sales? [3 marks]



Answer: _____

- 3 This dot plot should show **12** students' scores, but one dot is **missing**. With the missing dot, the range is **7** and the mode is **6**. Where could the missing dot be? Find **all** the possibilities and explain why a dot at 6 does not work. [3 marks]



How did I go?Warm up ____ / 16 Practise ____ / 23 Think it through ____ / 10 Challenge ____ / 9 **Total** ____ / 58Want help with Year 6 maths? Our tutors make it click. **Book a free trial class at [edulift.com.au](https://www.edulift.com.au)**