

# Varied Fluency

## Step 1: Read and Interpret Line Graphs

### National Curriculum Objectives:

Mathematics Year 6: (6S1) [Interpret and construct pie charts and line graphs and use these to solve problems](#)

### Differentiation:

**Developing** Questions to support reading and interpreting line graphs showing 1 data set using scales in increments of 2 and 10 where all increments are shown.

**Expected** Questions to support reading and interpreting line graphs showing 2 data sets using any scales where all increments are shown.

**Greater Depth** Questions to support reading and interpreting line graphs showing 2 data sets using any scales where some of the increments are missing.

More [Year 6 Statistics](#) resource.

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Read and Interpret Line Graphs

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1a. Which of the following could you show on a line graph?

- A. How much snow falls over 24 hours.
- B. Your favourite pizza toppings.



VF

1b. Which of the following could you show on a line graph?

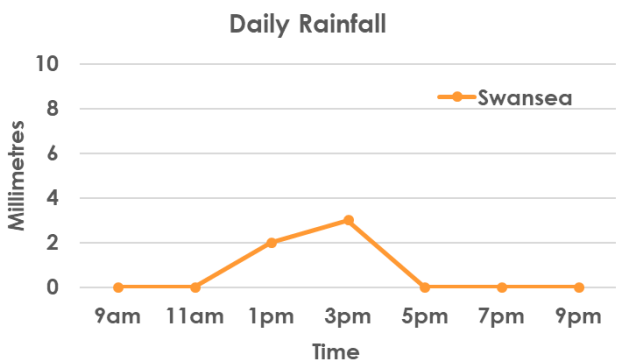
- A. A count of how many push-ups you can do every day for a month.
- B. How many different animals are at the zoo.



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2a. True or false?

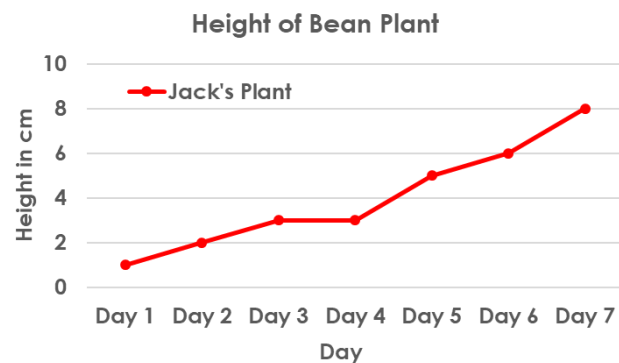
The graph shows that it rained from 9am to 9pm in Swansea.



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2b. True or false?

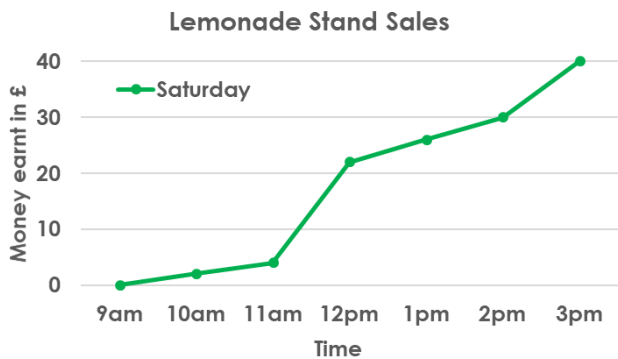
The bean plant didn't grow higher than 4cm.



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3a. According to the graph, which statements are correct?

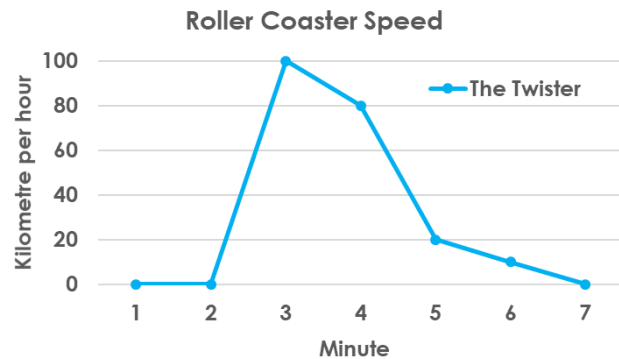
- A. The stand was busiest from 11am-12pm.
- B. The stand sells ice cream.



VF

3b. According to the graph, which statements are correct?

- A. The roller coaster is called The Drop.
- B. The Twister is stationary for the first minute.



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Read and Interpret Line Graphs

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- 4a. Which of the following could you show on a line graph?
- A. The titles of all the books read over a summer holiday.
  - B. How far two people can run in 2 hours.
  - C. How the price of milk and butter has changed over 20 years.



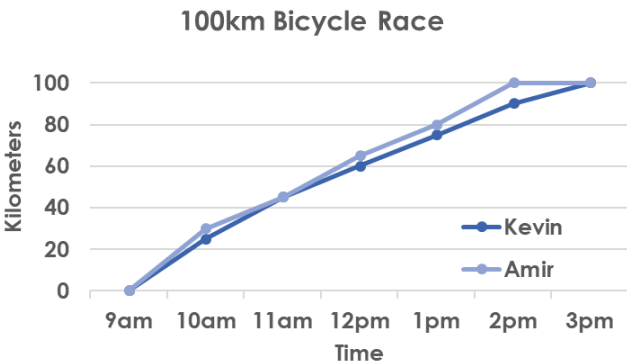
VF

- 4b. Which of the following could you show on a line graph?
- A. Your height measured on the same day every month for a year.
  - B. Water level of two rivers over a month.
  - C. The number of flowers growing in your garden.



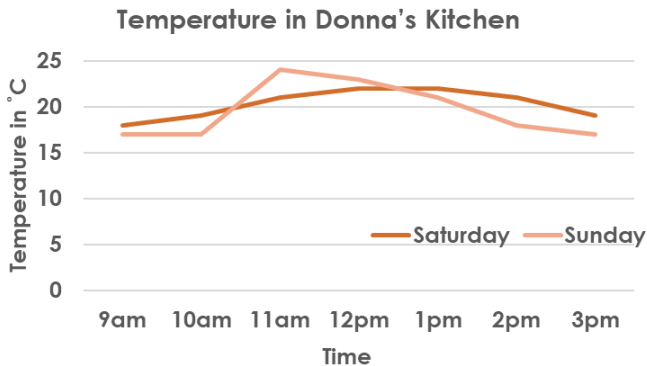
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- 5a. True or false?
- Kevin won the bicycle race.



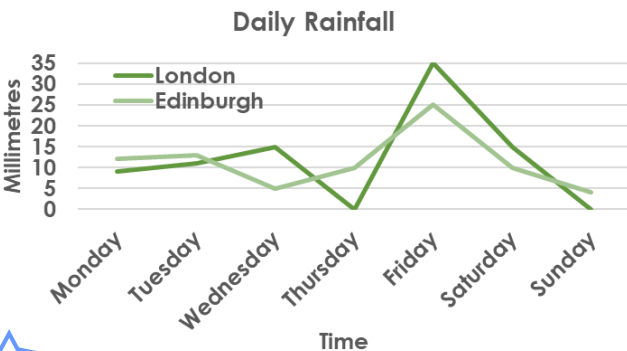
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- 5b. True or false?
- Donna had the heating on in her kitchen on Sunday morning.



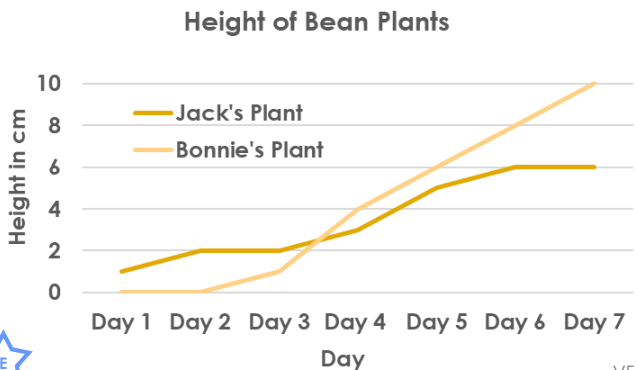
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- 6a. According to the graph, which statements are correct?
- A. Both cities had one day with no rain.
  - B. Friday was the rainiest day in both cities.



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- 6b. According to the graph, which statements are correct?
- A. Bonnie's bean plant was 4cm taller than Jack's on Day 7.
  - B. Jack's bean plant grew 1cm between Day 5 and Day 7.



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Read and Interpret Line Graphs

7a. Complete the table by giving an example of data that can be represented by each of the graphs or charts below.

Line Graph	
Bar Chart	



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Read and Interpret Line Graphs

7b. Complete the table by giving an example of data that can be represented by each of the graphs or charts below.

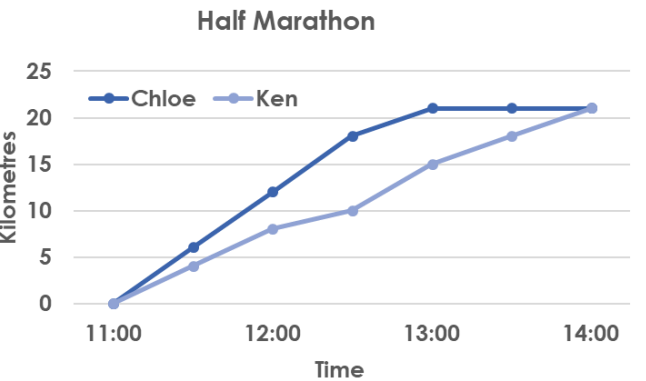
Line Graph	
Tally Chart	



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8a. True or false?

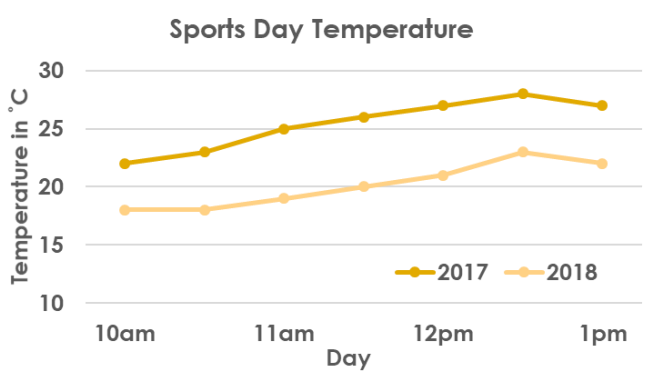
Both friends finished the half marathon (21km) by 1:30pm.



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8b. True or false?

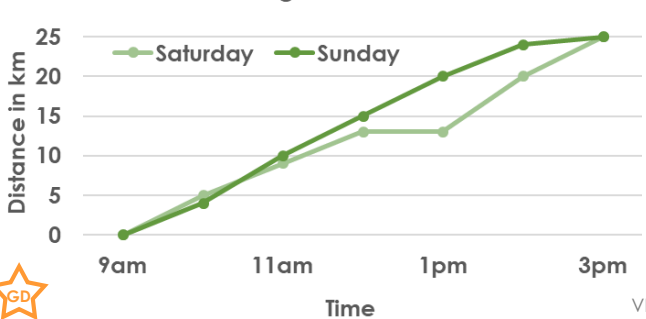
12:30pm was the warmest time during sports day in 2017 and 2019.



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9a. According to the graph, which statements are correct?

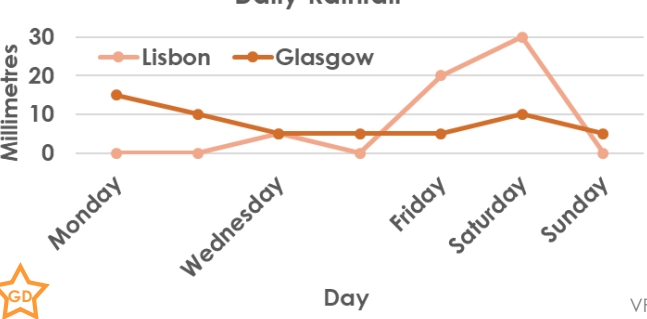
- A. On Sunday, the hiker walked quickest after 2pm.
- B. The hiker had walked 5km by 10am on Saturday.
- C. The hiker stopped for a break at 12pm on Saturday.



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9b. According to the graph, which statements are correct?

- A. Lisbon and Glasgow both had 5mm of rain on Wednesday.
- B. There was heavy rain in Glasgow on Friday.
- C. Lisbon had four days without rain this week.



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**Varied Fluency**  
**Read and Interpret Graphs**

**Developing**

- 1a. **A**
- 2a. **False, it rained from 11am to 5pm.**
- 3a. **A is correct.**

**Expected**

- 4a. **B and C**
- 5a. **False, Amir won the race.**
- 6a. **B is correct.**

**Greater Depth**

- 7a. **Various answers, for example:**  
**Line graph = weight of a baby measured on the same day every month for a year.**  
**Bar chart = number of children in class born on different days of the week.**
- 8a. **False as Ken still has 3km to run.**
- 9a. **B and C are correct.**

**Varied Fluency**  
**Read and Interpret Graphs**

**Developing**

- 1b. **A**
- 2b. **False, the bean plant grew to 8cm.**
- 3b. **B is correct.**

**Expected**

- 4b. **A and B**
- 5b. **True, Donna turns the heating on at about 10am.**
- 6b. **Both statements are correct.**

**Greater Depth**

- 7b. **Various answers, for example:**  
**Line graph = number of people in a shop throughout the day.**  
**Tally chart = types of vehicles on the car park.**
- 8b. **True**
- 9b. **A and C are correct.**