

# Homework/Extension

## Step 1: Read and Interpret Line Graphs

### National Curriculum Objectives:

Mathematics Year 5: (5S2) [Solve comparison, sum and difference problems using information presented in a line graph](#)

### Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

**Developing** Read and interpret a line graph showing 1 data set using scales in increments of 1 or 2 where all increments are shown.

**Expected** Read and interpret a line graph showing up to 2 data sets using any scale where all increments are shown.

**Greater Depth** Read and interpret a line graph showing up to 2 data sets using any scale where some increments are missing.

Questions 2, 5 and 8 (Varied Fluency)

**Developing** Identify an incorrect statement about data on a line graph showing 1 data set using scales in increments of 1 or 2 where all increments are shown.

**Expected** Identify incorrect statements about data on a line graph showing up to 2 data sets using any scale where all increments are shown.

**Greater Depth** Identify incorrect statements about data on a line graph showing up to 2 data sets using any scale where some increments are missing.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

**Developing** Explain the shape of a line graph showing 1 data set using scales in increments of 1 or 2 where all increments are shown.

**Expected** Explain the shape of a line graph showing up to 2 data sets using any scale where all increments are shown.

**Greater Depth** Explain the shape of a line graph showing up to 2 data sets using any scale where some increments are missing.

More [Year 5 Statistics](#) resources.

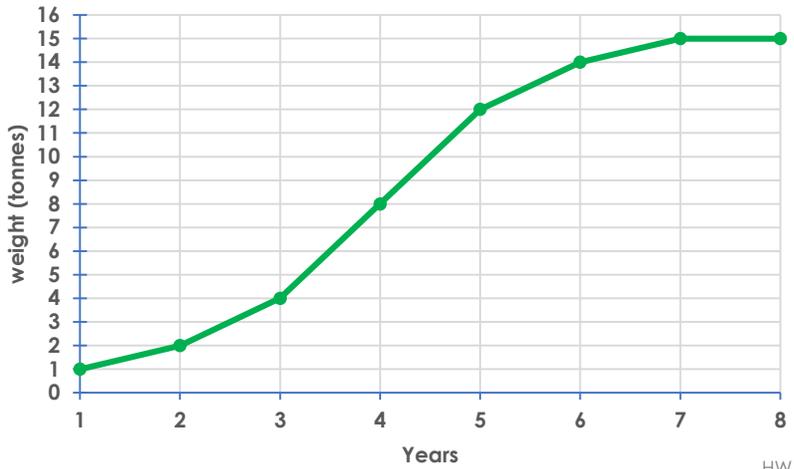
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# Read and Interpret Line Graphs

1. This graph tracks the weight of a dragon from its first birthday until reaching adulthood.

- A. How much did the dragon weigh when it was 4?
- B. At what age did the dragon reach its full weight?

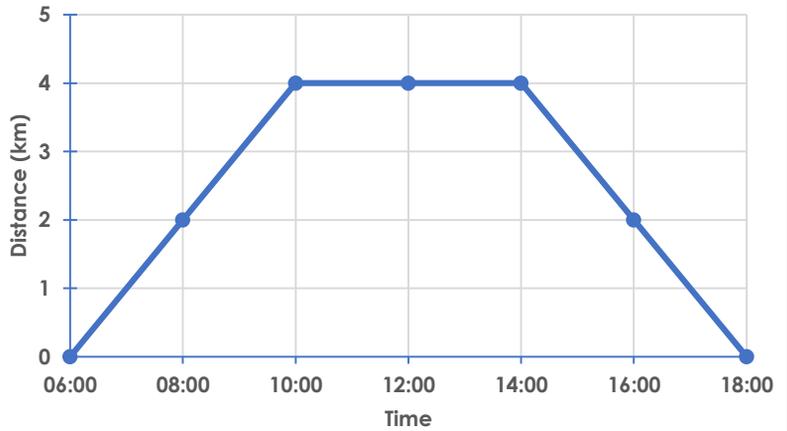
Weight of Dragon



2. Which of these statements is false?

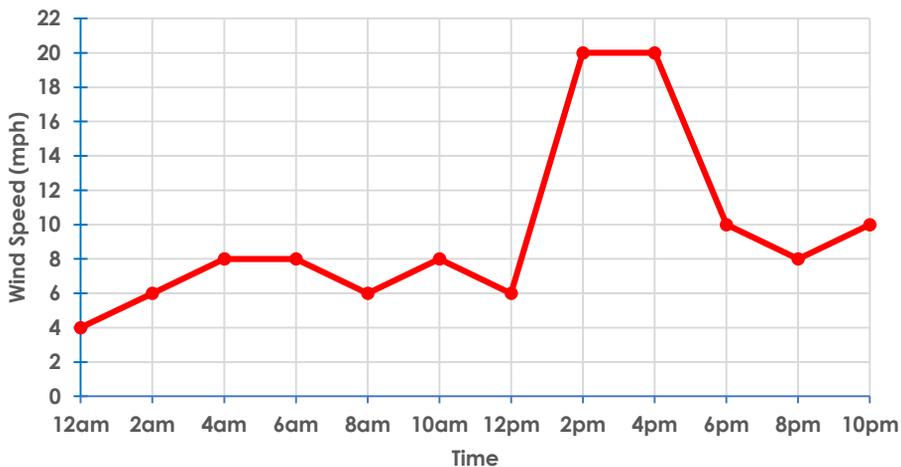
- A. His friend lives 4km away.
- B. John got home at 16:00.
- C. He stayed there for 4 hours.

John's Distance from his House When Visiting a Friend's House



3. There was a storm during the day. What time did it start? Explain your answer.

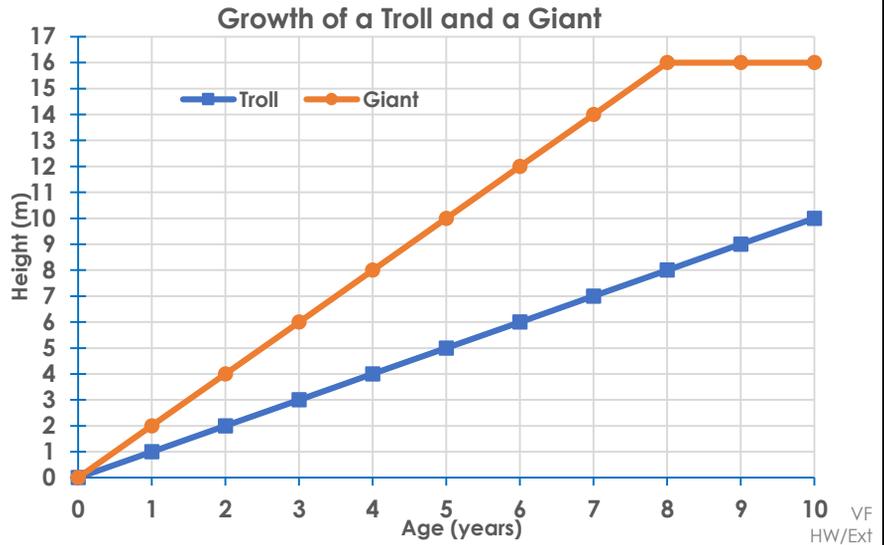
Wind Speed Throughout the Day



# Read and Interpret Line Graphs

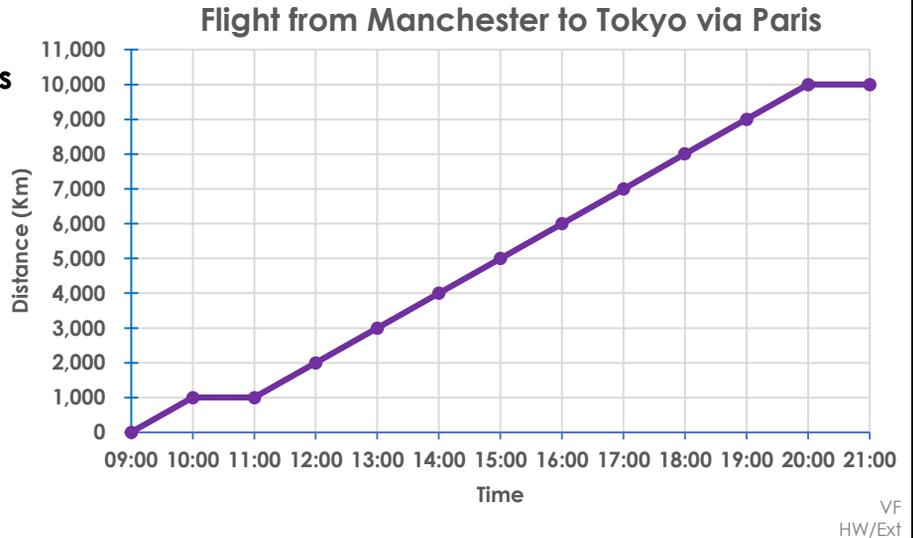
4. A troll and a giant grow at the same rate each year until they reach their full heights.

- A. At what age did the giant reach its full height?  
 B. What was the troll's height when it was 7 years old?

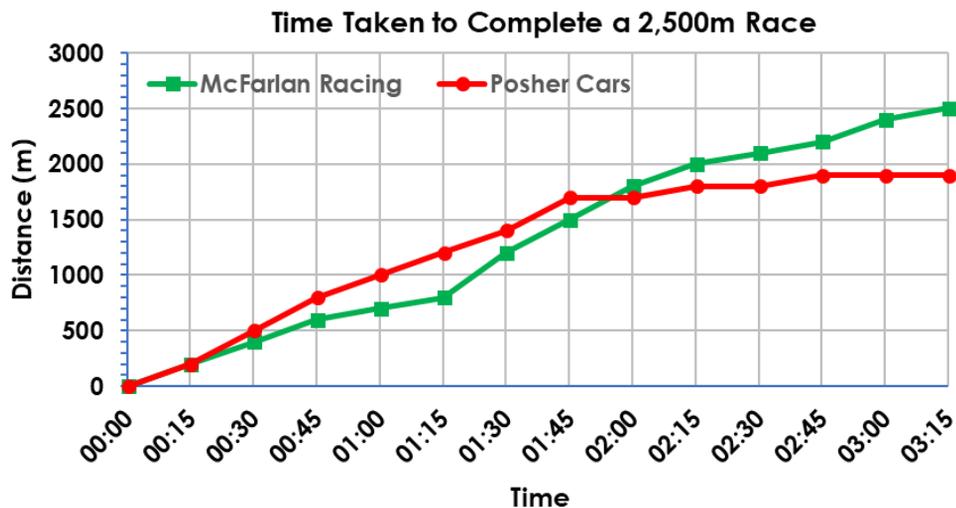


5. Which of these statements are false?

- A. The plane stopped in Paris at 10:00.  
 B. The plane arrived in Tokyo at 21:00  
 C. The distance between Paris and Tokyo is 10,000km.



6. The 'Posher Cars' race car had engine problems. What time did the problems start? Explain your answer.

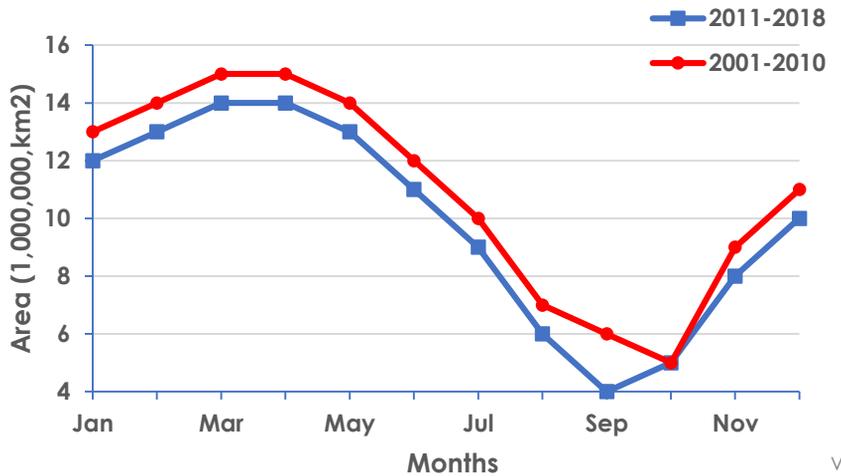


# Read and Interpret Line Graphs

7. Use the chart to answer the questions.

- A. Which decade had the least amount of frozen sea ice?
- B. What is the difference between the average area of sea ice for September between the two decades?

Average Area of Frozen Arctic Sea Ice

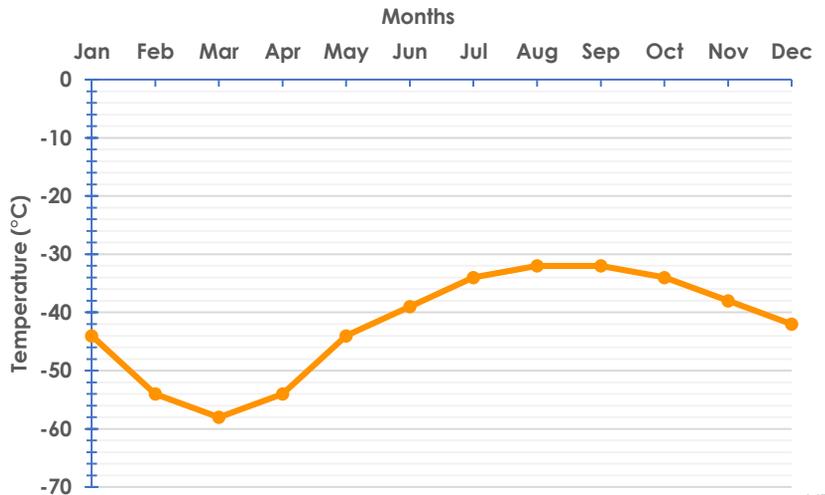


VF  
HW/Ext

8. Which of these statements are false?

- A. Mars is coldest between August and September.
- B. The average temperature is the same in January and May.
- C. The difference between the highest and lowest average temperature is  $24^{\circ}\text{C}$ .

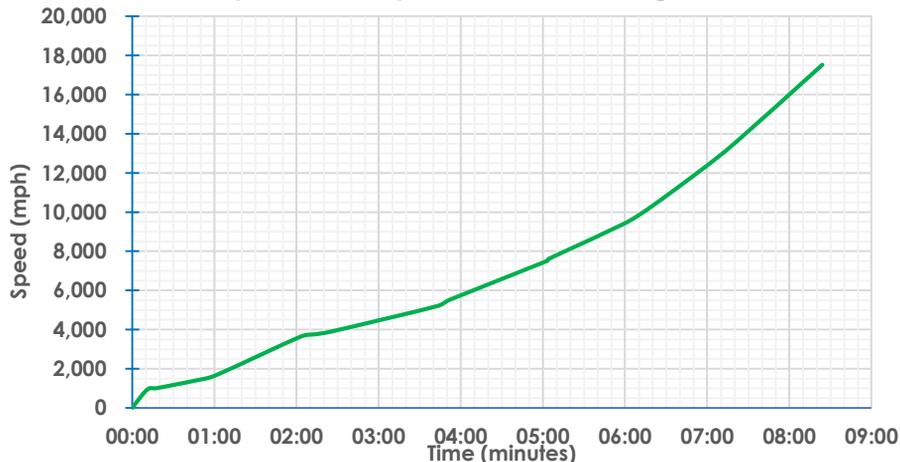
Average Temperature on Mars



VF  
HW/Ext

9. A space shuttle burns heavy fuel during a launch. When was the shuttle's acceleration at its fastest? Explain your answer.

Speed of a Space Shuttle During Launch



RPS  
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## Homework/Extension

### Read and Interpret Line Graphs

#### Developing

1. A = 8 tonnes; B = 7 years old
2. B
3. The storm started between 12pm and 2pm and continued until 4pm. I know this because there was a big increase in the wind speed between 12pm and 2pm.

#### Expected

4. A = 8 years old; B = 7m
5. B and C
6. The engine trouble started at 01:45. I know this because after 01:45 the distance hardly increased at all.

#### Greater Depth

7. A = 2011-2018; B = 2,000,000km<sup>2</sup>
8. A and C
9. The shuttle accelerated during the first 10 seconds.