

Reasoning and Problem Solving

Step 3: Problems with 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 (Problem Solving)

Developing Solve a comparison problem using a line graph that shows one set of data. All increments are labelled. Scales include increments of 1 or 2 only.

Expected Decide which data set fits a given scenario. Using a line graph that shows two sets of data. All increments are labelled and various scales are used. Some points may fall between marked increments.

Greater Depth Decide which data set fits a given scenario using a line graph that shows two sets of data. Various scales used. Some increments are unlabelled and points may fall between marked increments.

Questions 2, 5 and 8 (Problem Solving)

Developing Complete two comparison statements about a line graph that shows one set of data. All increments are labelled. Scales include increments of 1 or 2 only.

Expected Complete two comparison statements about a line graph that shows two sets of data. All increments are labelled and various scales are used. Some points may fall between marked increments.

Greater Depth Complete two comparison statements about a line graph that shows two sets of data. Various scales used. Some increments are unlabelled and points may fall between marked increments.

Questions 3, 6 and 9 (Reasoning)

Developing Explain whether a given statement is correct by comparing points from one set of data. All increments are labelled. Scales include increments of 1 or 2 only.

Expected Explain whether a given statement is correct by comparing two sets of data. All increments are labelled and various scales are used. Some points may fall between marked increments.

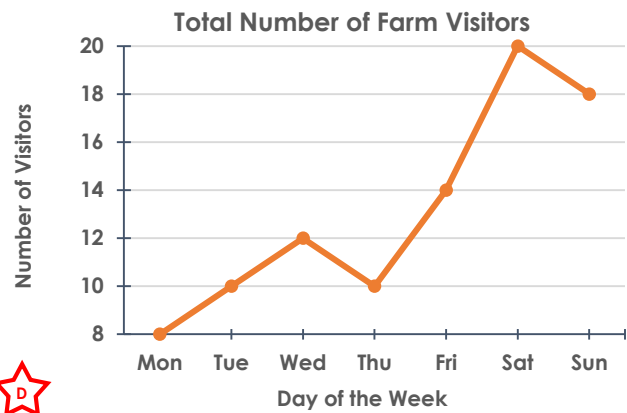
Greater Depth Explain whether a given statement is correct by comparing two sets of data. Various scales used. Some increments are unlabelled and points may fall between marked increments.

More [Year 5 Statistics](#) resources.

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Problems with Line Graphs

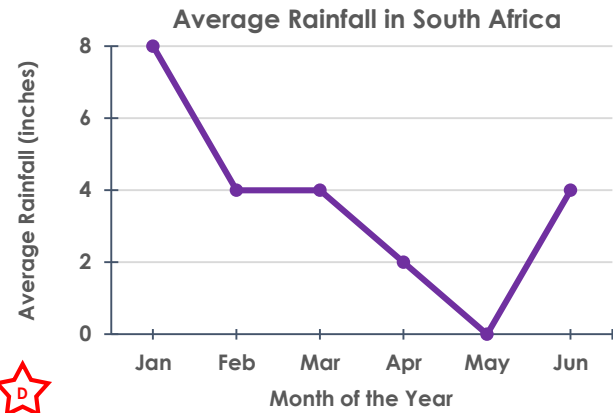
1a. When Jason visited the farm, there were 8 fewer visitors than there had been on Saturday. Which day did he visit the farm?



PS

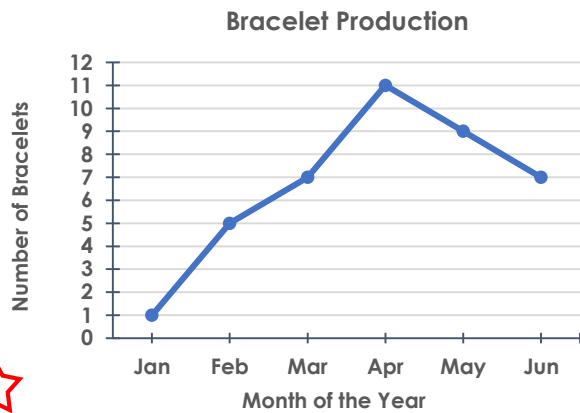
Problems with Line Graphs

1b. When Jemimah visited South Africa, 4 more inches of rain fell than in June. Which month did she visit South Africa?



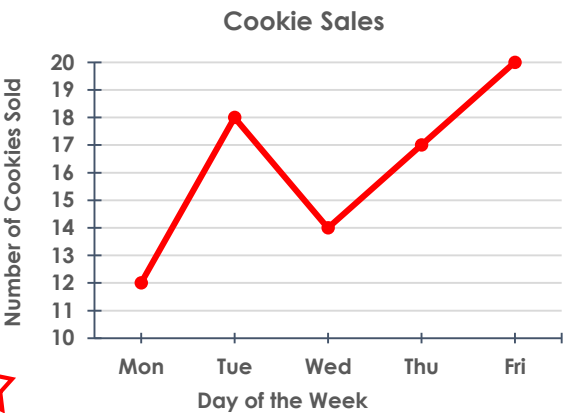
PS

2a. Complete the sentences.
10 more bracelets were made in ____ than _____. The same number of bracelets were made in ____ and _____.



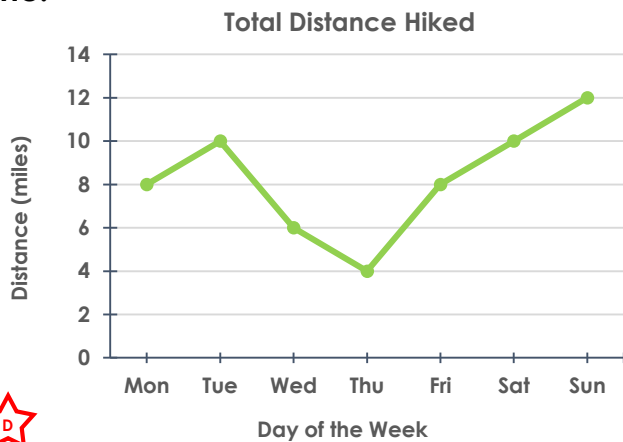
PS

2b. Complete the sentences.
5 fewer cookies were sold on ____ than _____. More than 17 cookies were sold on ____ and _____.



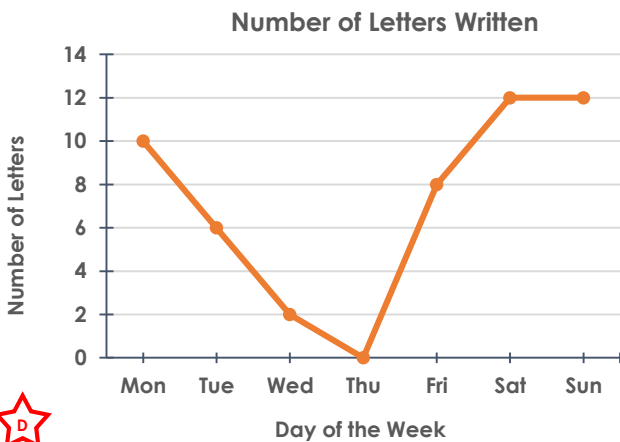
PS

3a. Callum thinks that he hiked further than 60 miles in total last week. Is he correct? Use the line graph to convince me.



R

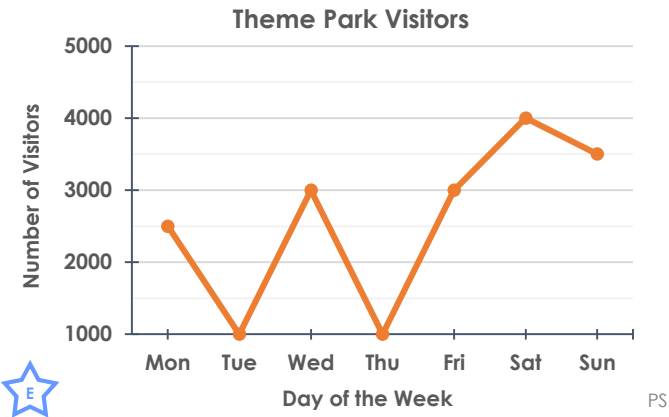
3b. Lauren thinks that she wrote more than 50 letters last week. Is she correct? Use the line graph to convince me.



R

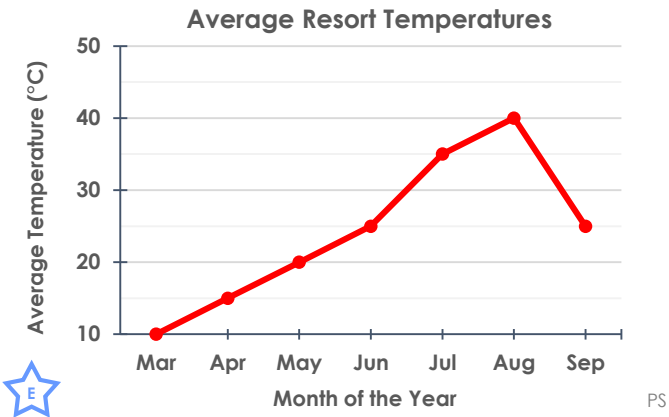
Problems with Line Graphs

4a. Sarah visited the theme park the day before Michael. When she went, there were 2,000 more visitors than when Michael went. What day did Sarah go?

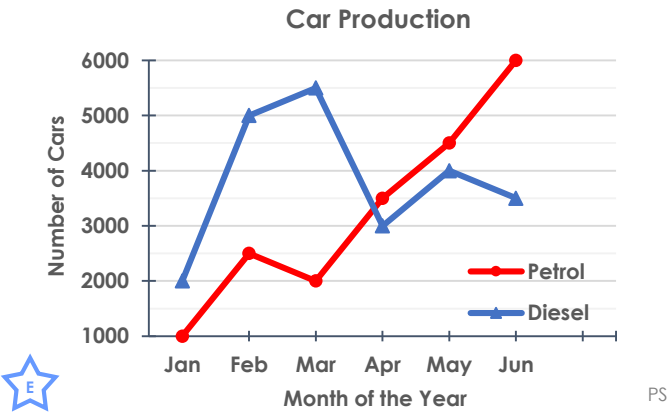


Problems with Line Graphs

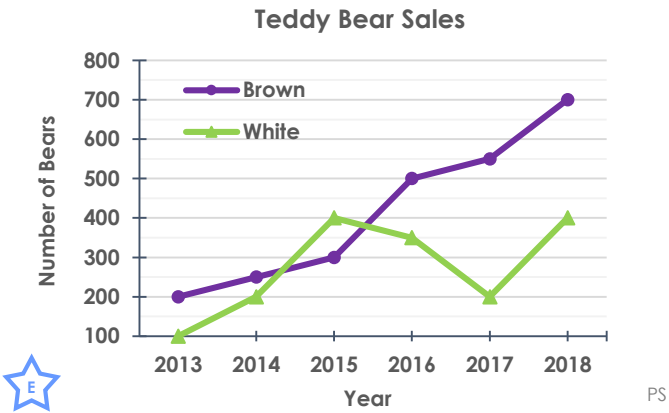
4b. Lucas visited the holiday resort the month after Kath. When he went, it was 10°C hotter on average than when Kath went. What month did Lucas go?



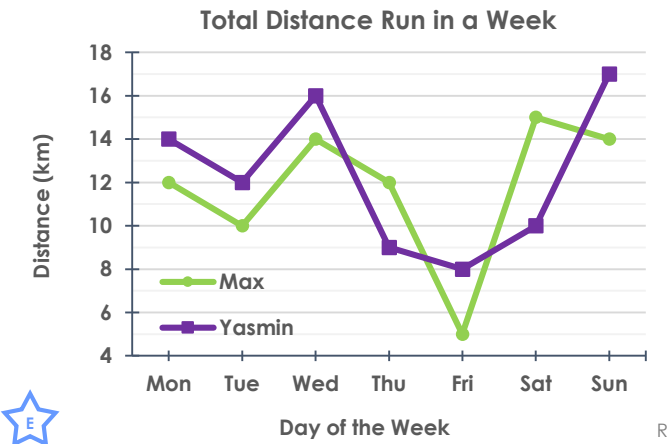
5a. Complete the sentences.
500 more petrol cars were made in _____ than _____. More diesel cars were made in _____ and _____ than in May.



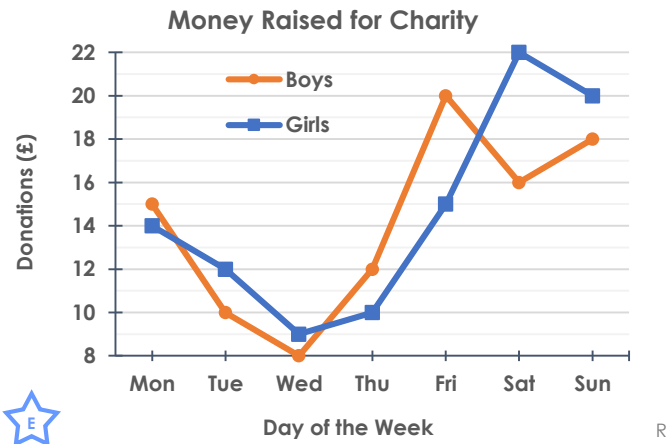
5b. Complete the sentences.
100 more brown bears were sold in _____ than _____. The same number of white bears were sold in _____ and _____.



6a. Max thinks that Yasmin ran further than him last week. Is he correct? Use the line graph to convince me.

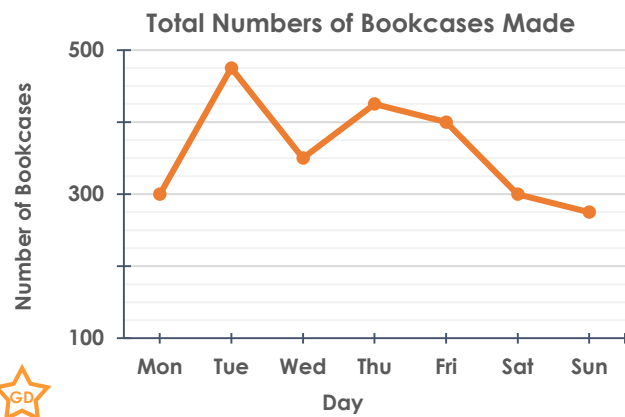


6b. Fay thinks that the girls raised more money than the boys. Is she correct? Use the line graph to convince me.



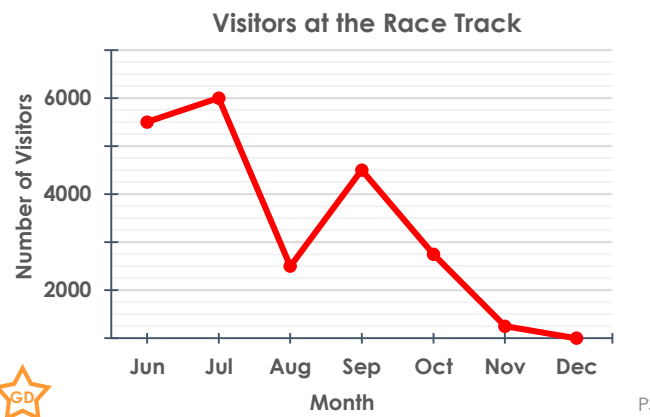
Problems with Line Graphs

7a. Molly worked one day this week. On the day that she worked, 100 fewer bookcases were made than the day before. What day did she work?



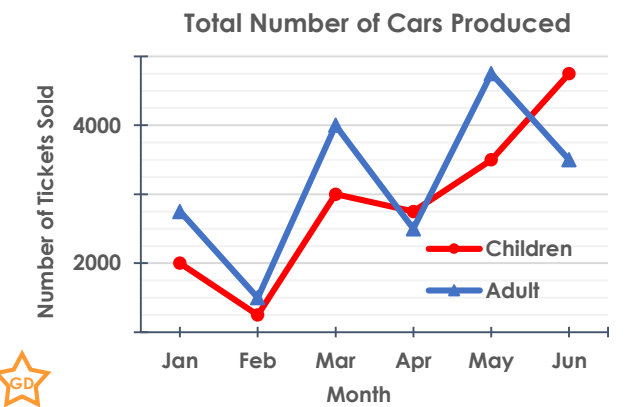
Problems with Line Graphs

7b. In the month that Pascal visited the race track, there were 2,000 more visitors than the month before. When did he go to the race track?



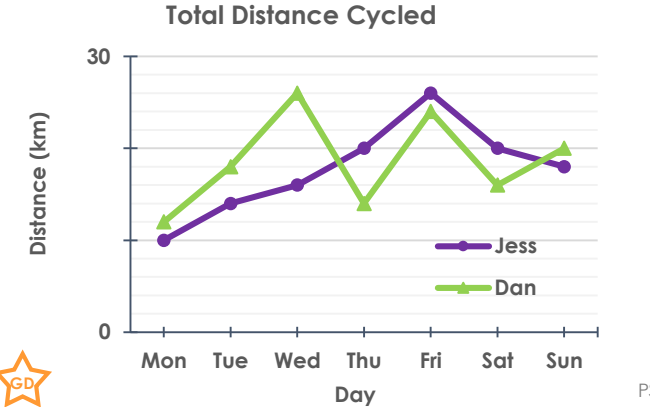
8a. Complete the sentences.

500 more children's tickets were sold in _____ than _____. More adult tickets were sold in _____ and _____ than in June.

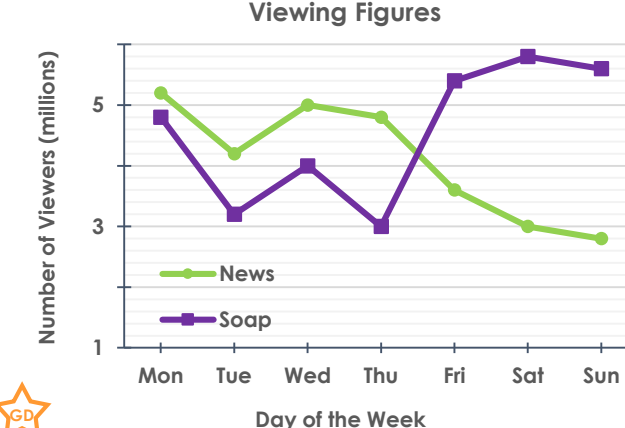


8b. Complete the sentences.

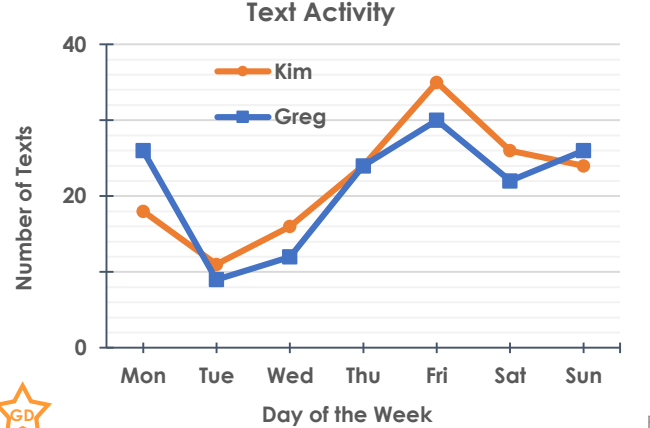
Jess cycled 14km further on _____ than _____. Dan cycled further on _____ and _____ than Sunday.



9a. Alf thinks that over the course of a week more people watched the news than the soap opera. Is he correct? Use the line graph to convince me.



9b. Kim thinks that she sent more texts than Greg last week. Is she correct? Use the line graph to convince me.



Reasoning and Problem Solving Problems with Line Graphs

Developing

- 1a. **Wednesday**
- 2a. **April, January; March, June**
- 3a. **Callum is incorrect because he hiked 58 miles in total.**

Expected

- 4a. **Wednesday**
- 5a. **February, March; February, March**
- 6a. **Max is correct because he ran 82km and Yasmin ran 86km.**

Greater Depth

- 7a. **Saturday**
- 8a. **May, March; March, May**
- 9a. **Alf is incorrect because 28.6 million people watched the news and 31.8 million people watched the soap.**

Reasoning and Problem Solving Problems with Line Graphs

Developing

- 1b. **January**
- 2b. **Monday, Thursday; Tuesday, Friday**
- 3b. **Lauren is incorrect because she wrote exactly 50 letters.**

Expected

- 4b. **July**
- 5b. **2015, 2013; 2014, 2017 and 2015, 2018**
- 6b. **Fay is correct because the girls raised £102 and the boys raised £99.**

Greater Depth

- 7b. **September**
- 8b. **Wednesday, Monday; Wednesday, Friday**
- 9b. **Kim is correct because she sent 154 texts and Greg sent 149.**