

Warm-up

What is the average mean for the following sets of data?

The shoe sizes worn by eight women:

3 5 3 4 6 3 5 3

The number of people sitting at each table of a cafe:

4 1 0 2 1 4 1 1 4 3 4 1 0

The daily maximum temperatures in celsius for one week in February

4 5 1 -2 -1 4 3

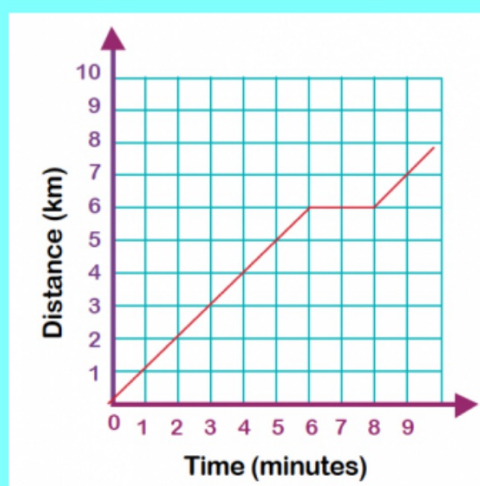
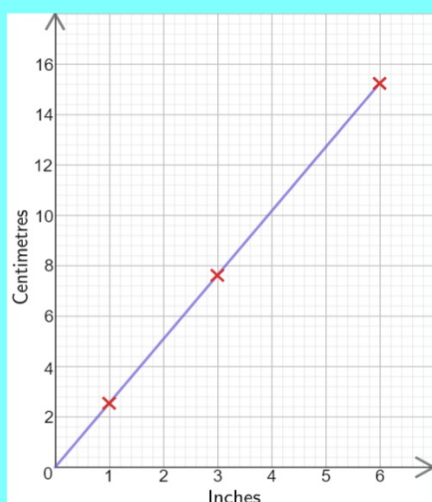
Can I interpret line graphs?

What is a line graph?

What is the difference between a line graph and a conversion graph?

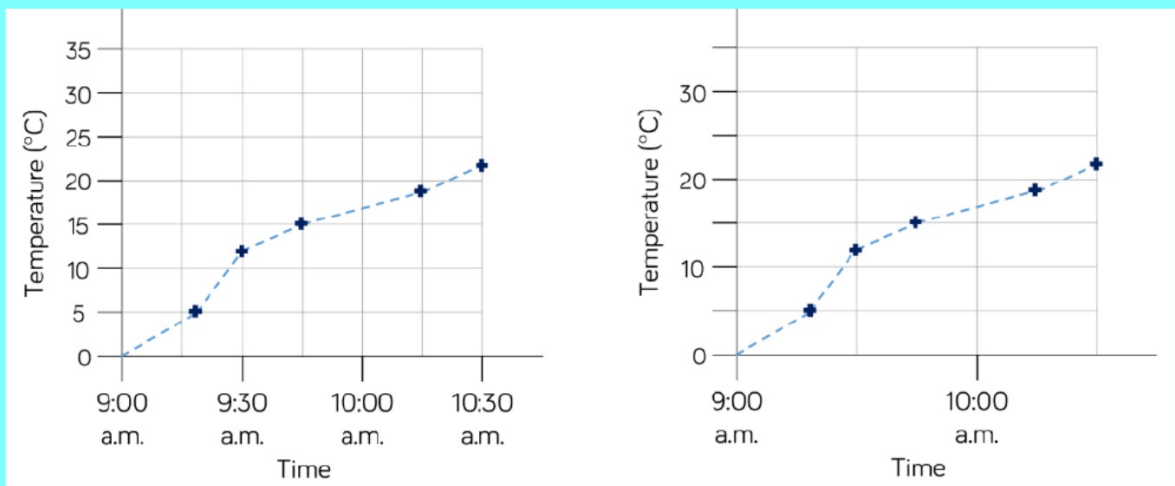
Can I interpret line graphs?

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Can I interpret line graphs?

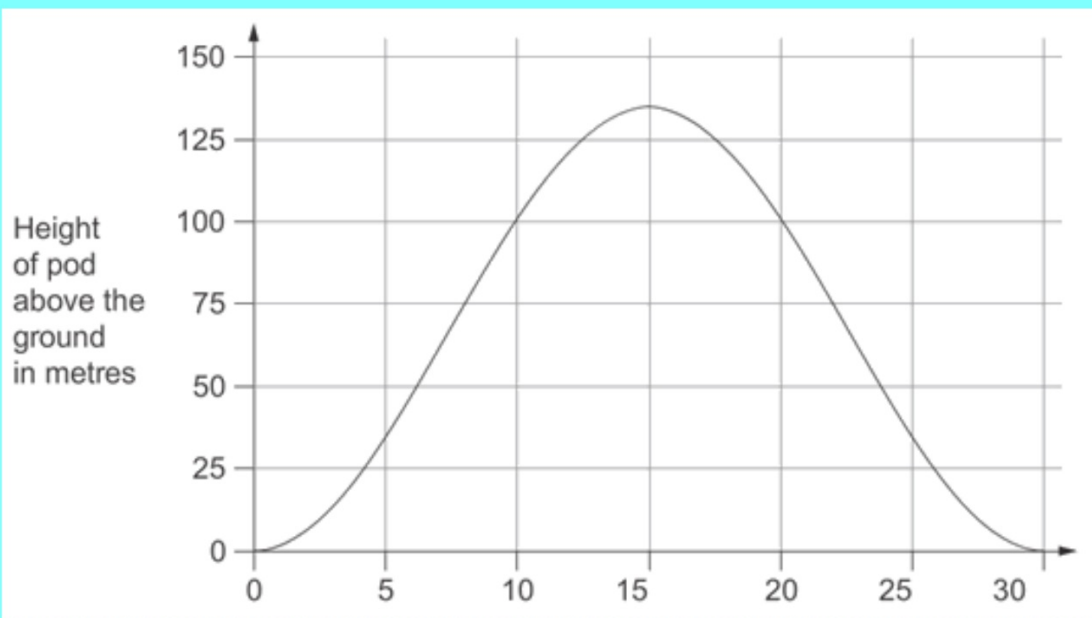
What is the same and what is different about these two graphs?



Can I interpret line graphs?

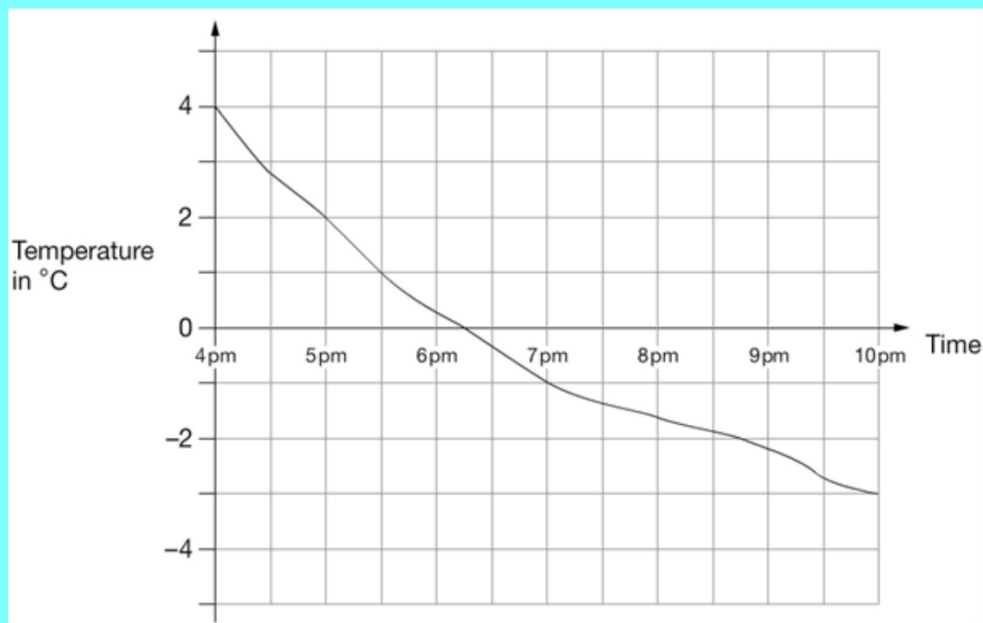


The height of a pod on the London Eye above the ground as the wheels turns



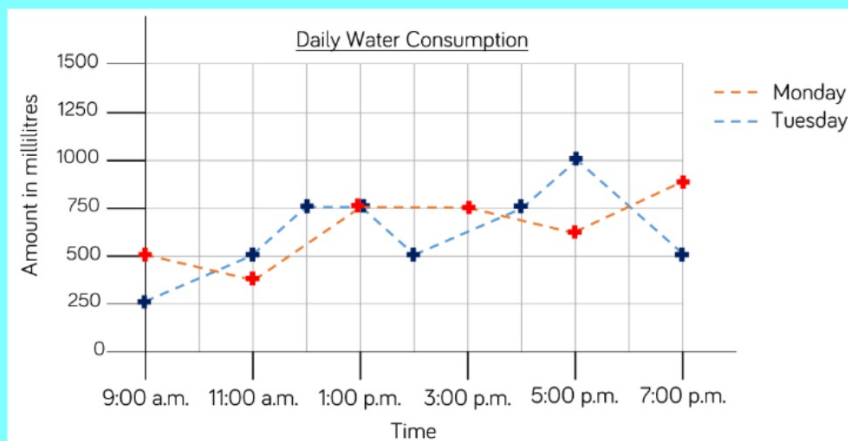
Can I interpret line graphs?

The outside temperature from 4pm to 10pm on a day in winter



Can I interpret line graphs?

Here is a graph showing daily water consumption over two days.



Can I interpret line graphs?

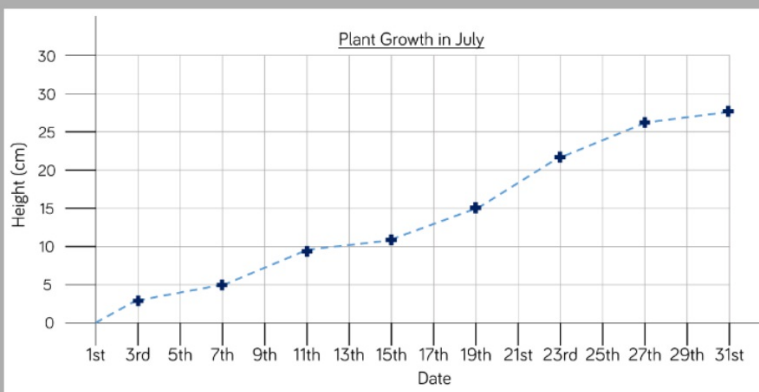
WALK: Reading a line graph with an easy scale

RUN: Reading a line graph with a slightly harder scale

SPRINT: Reading a line graph with two lines on

Warm-up

Eva has created a graph to track the growth of a plant in her house.



Eva recorded the following facts about the graph:

- On the 9th of July the plant was about 9 cm tall.
- Between the 11th and 19th July the plant grew about 5 cm
- At the end of the month the plant was twice as tall as it had been on the 13th

Can you spot and correct Eva's mistakes?

Can I interpret line graphs?

WALK: Reading a line graph with an easy scale

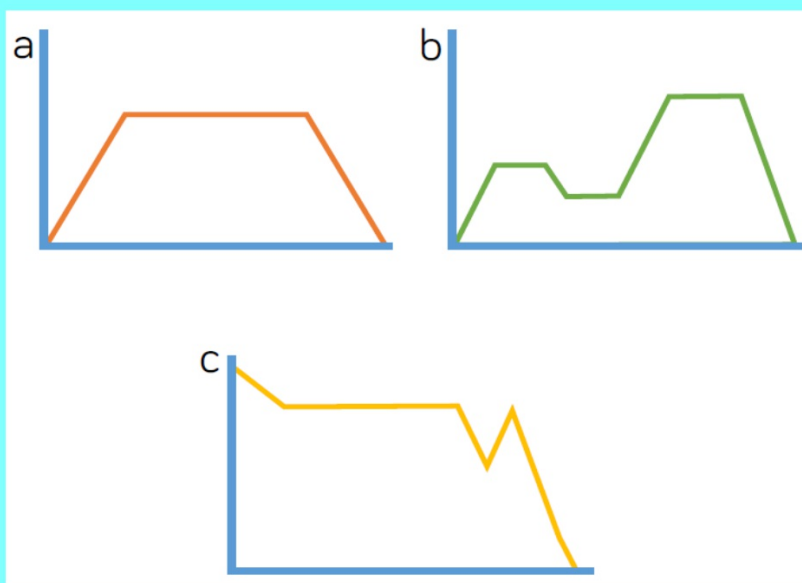
RUN: Reading a line graph with a slightly harder scale

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Can I interpret line graphs?

Extension

Write a story and 3 questions for each of the 3 graphs below:



Warm-up

- 1) Clayton plays basketball on a team. He has played three games so far. In the first game, he scored 10 points. In the second game, he scored 14 points. In the third game, he scored 6 points. What is Clayton's average points per game?
- 2) Mandy earns money by delivering groceries. She earned £4 on Monday, £7 on Tuesday, £5 on Wednesday, £4 on Thursday, and £5 on Friday. What is the average amount of money Mandy earned per day?
- 3) Jean loves to go birdwatching. One day, she saw 7 birds. The next day, she saw 11 birds. The next day, she saw no birds. What is the average number of birds Jean saw each day?
- 4) Harley read 5 books in January, 8 books in February, 4 books in March, and 7 books in April. What is the average number of books Harley read per month?

Warm-up

1) Clayton plays basketball on a team. He has played three games so far. In the first game, he scored 10 points. In the second game, he scored 14 points. In the third game, he scored 6 points. What is Clayton's average points per game? 10

2) Mandy earns money by delivering groceries. She earned £4 on Monday, £7 on Tuesday, £5 on Wednesday, £4 on Thursday, and £5 on Friday. What is the average amount of money Mandy earned per day? 5

3) Jean loves to go birdwatching. One day, she saw 7 birds. The next day, she saw 11 birds. The next day, she saw no birds. What is the average number of birds Jean saw each day? 5

4) Harley read 5 books in January, 8 books in February, 4 books in March, and 7 books in April. What is the average number of books Harley read per month? 6

Can I interpret and construct line graphs?

This table shows the height a rocket reached between 0 and 60 seconds.

Time (seconds)	Height (metres)
0	0
10	8
20	15
30	25
40	37
50	50
60	70

Can I interpret and construct line graphs?

The table below shows the population in the UK and Australia from 1990 to 2015.

	1990	1995	2000
UK	57,200,000	58,000,000	58,900,000
Australia	17,000,000	18,000,000	19,000,000
	2005	2010	2015
UK	60,300,000	63,300,000	65,400,000
Australia	20,200,000	22,100,000	23,800,000

Can I interpret and construct line graphs?

WALK: Draw the line graph for question 7 (A)

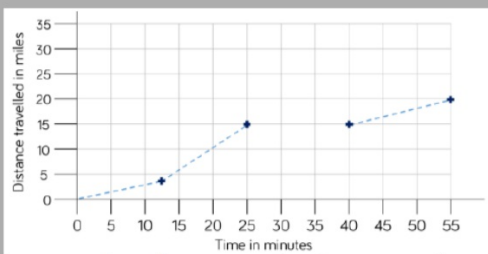
RUN: Draw the line graph for question 7 (B)

SPRINT: Draw the line graph for question 5 (C)

Hints:

- > Use a sharp pencil
- > Leave room to label your axes (at least 3 squares away from margin / and the bottom of the sheet)
- > Work out the scale of each axes first
- > What's being controlled will go on the x-axis
- > Remember labels and a title

WARM-UP

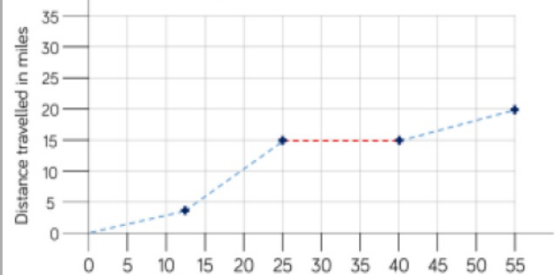


This graph shows the distance a car travelled.

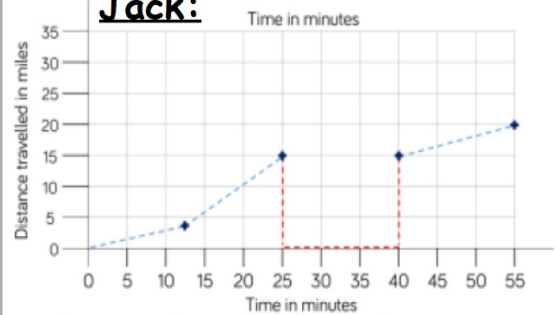
Rosie and Jack were asked to complete the graph to show the car had stopped. Here are their completed graphs.

Whose is correct? How do you know?

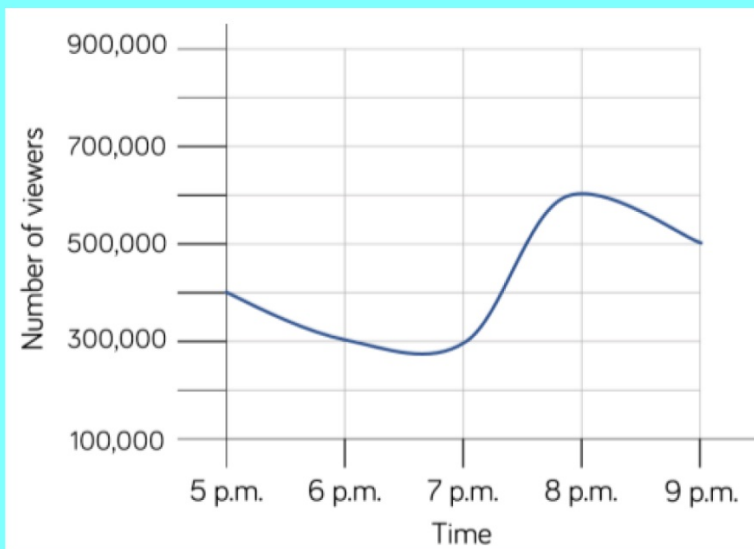
Rosie:



Jack:



Can I use line graphs to solve problems and reason?



Ron and Annie watched the same channel, but at different times.

The graph shows the number of viewers at different times.

Ron watched 'Chums' at 5 p.m.

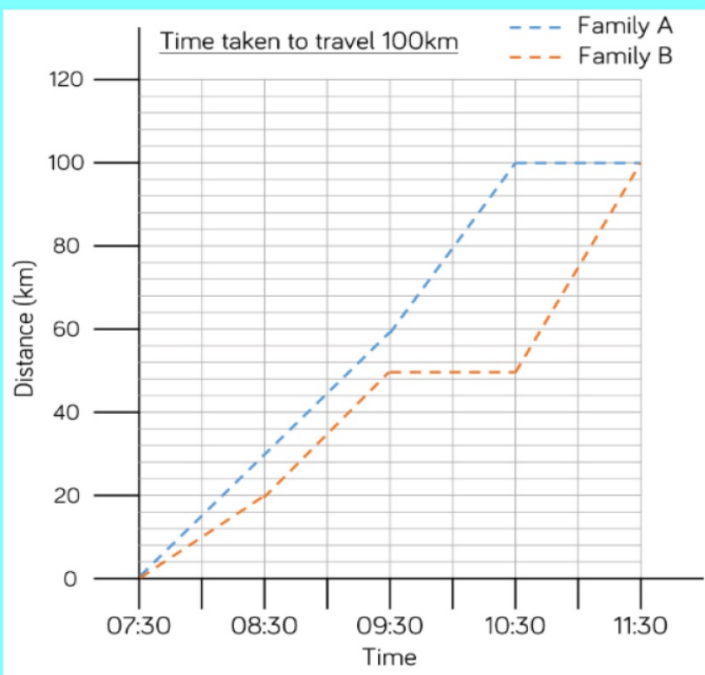
Annie watched 'Countup' at 8 p.m.

> What was the difference between the number of viewers at the start of each programme?

> What was the difference in the number of viewers between 6 p.m. and 8 p.m.?

> Which time had twice as many viewers as 6 p.m.?

Can I use line graphs to solve problems and reason?



Two families were travelling to Bridlington for their holidays.

They set off at the same time but arrived at different times.

- > What time did family A arrive?
- > How many km had each family travelled at 08:45?
- > Which family stopped midway through their journey?
- > How much further had they left to travel?