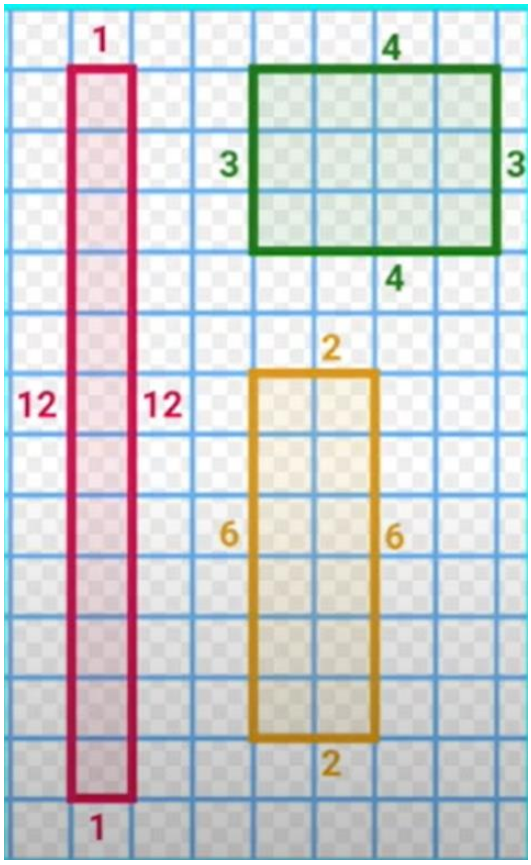
4/02/21

(Starter) O LO: Can I recognise that shapes with the same area can sometimes have different perimeters?

(Main) O LO: Can I continue to draw line graphs and start to solve problems using the data shown?

Start by completing the starter task below on finding area and perimeter of each shape in cm. Do you notice anything interesting about the perimeter and area of each shape? Are they the same or different? To get the answers for this section, check the maths weekly input video.

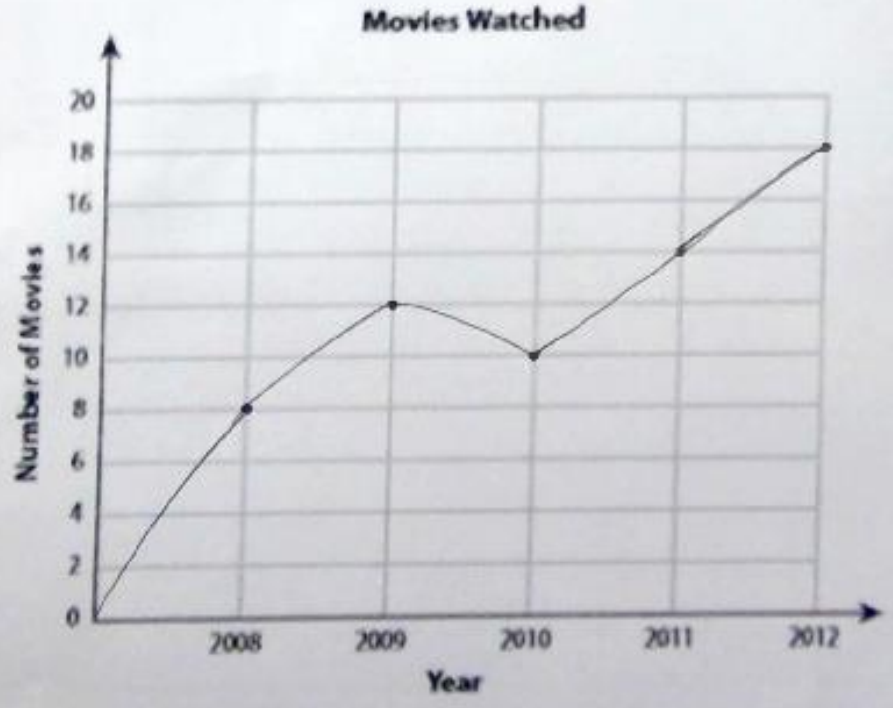


Your main task is to finish drawing out the graphs from the lesson yesterday (if you haven't already). If you have, you can then move on to answering questions about each graph and the data shown. You can use the graphs you have drawn to help you as well as the graphs drawn below.

Line Graph - Movies Watched

Kim and his family often watch movies at home. The data shows the number of movies watched by them from 2008 to 2012. Draw a line graph to represent the data

Year	Number of Movies
2008	8
2009	12
2010	10
2011	14
2012	18



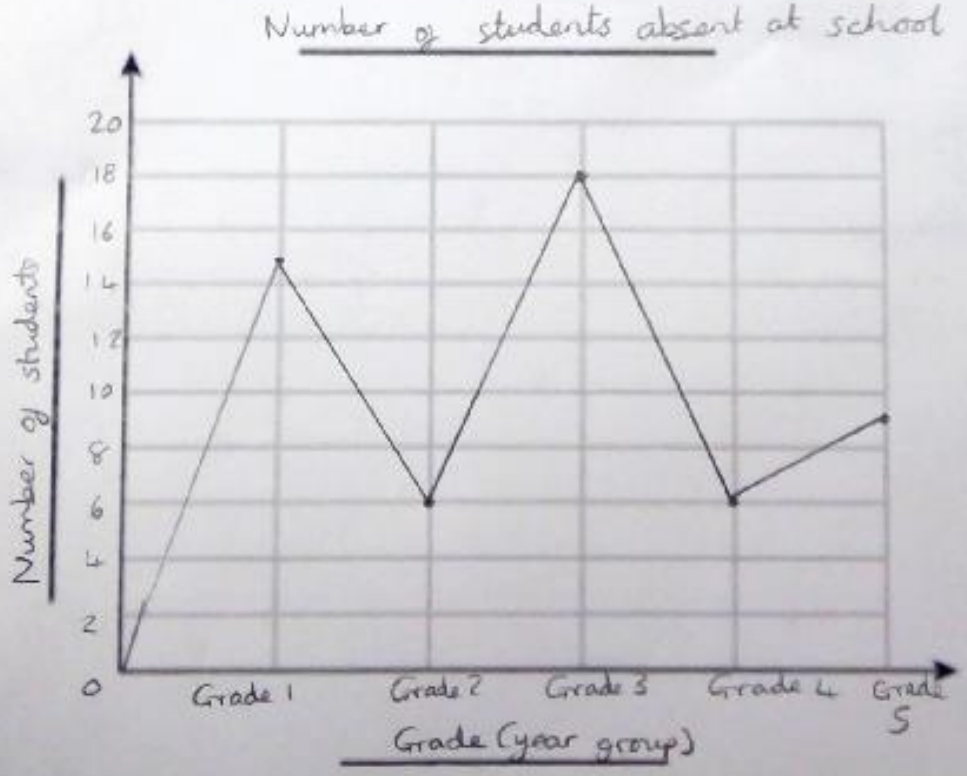
Questions:

1. In what year did Kim and his family watch the least number of films?
2. What is the difference between the number of films they watched in 2008 and the number of films they watched in 2012?
3. If Kim and his family watch 2 more films every year from 2010 onwards, how many films will they have watched in 2014?

Line Graph - Absentees in a Class

The number of absentees from grade 1 to grade 5 at a school in a month are given below. Make an appropriate scale and draw a line graph. Also label the axes and writ a title for the graph.

Grade	Number of Students
Grade 1	15
Grade 2	6
Grade 3	18
Grade 4	6
Grade 5	9



Questions:

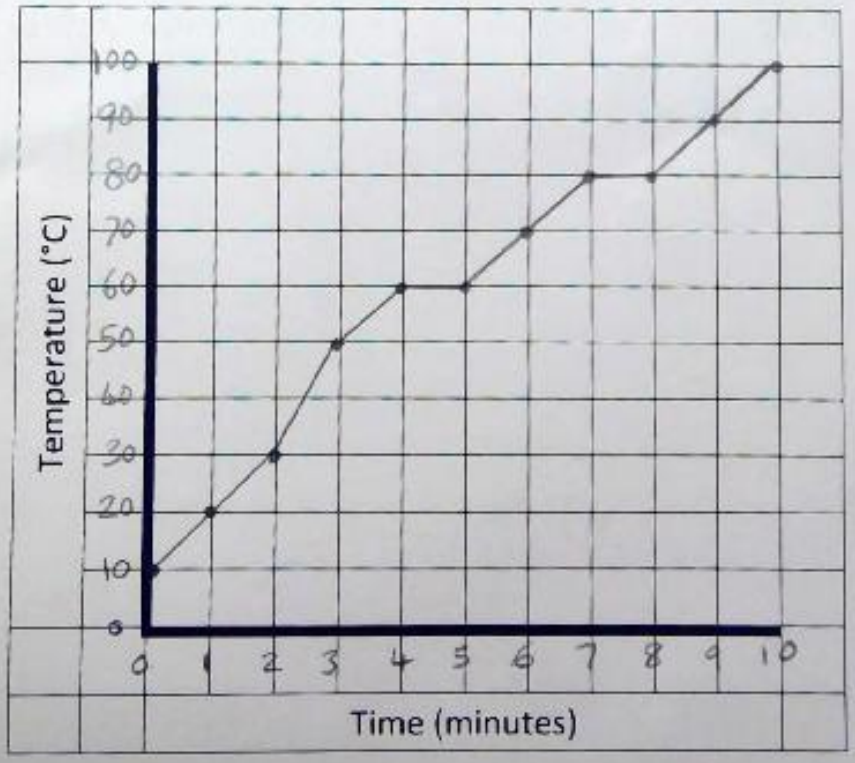
1. Which Grade (year group) had the highest number of absences this month?
2. Which Grade (year group) had the lowest number of absences this month?
3. What is the difference between the number of absences in Grade 3 and the number of absences in Grade 4?
4. How many students were absent altogether this month?

Plotting Line Graphs

The table below shows how quickly a beaker of water was heated up using a Bunsen Burner.

Time (minutes)	Temperature (°C)
0	10
1	20
2	30
3	50
4	60
5	60
6	70
7	80
8	80
9	90
10	100

Plot the information on this line graph.



Questions:

1. What was the starting temperature?

2. What was the temperature at 5 minutes?

3. What was the finishing temperature?

4. What might the temperature have been after 5 and a half minutes?

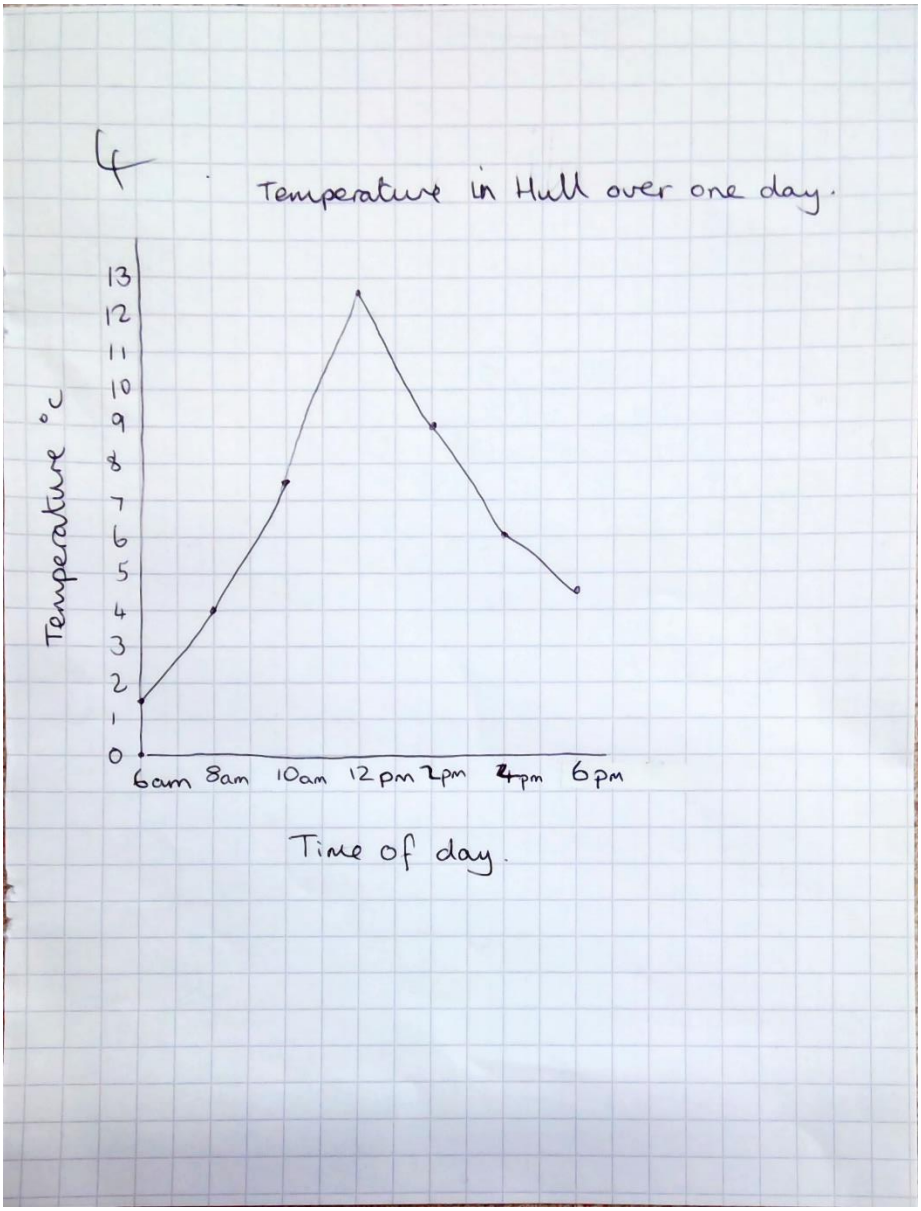
5. How much did the temperature increase after 5 minutes?

Plotting Line Graphs – Extension (decimal number scale)

The table below shows the temperature in Hull over a single day

Time	Temperature (°C)
6am	1.5
8am	4
10am	7.5
12pm	12.5
2pm	9
4pm	6
6pm	4.5

Draw a line graph in your book (count up in 1s for the temperature axis, leaving a gap between each number) and plot this information on it. Put the times across the bottom and the temperature up the side.



1. At what time was it coldest?

2. Between which two times was the biggest change in temperature?

3. At what time would it be best to be outside? Explain your answer using 'because'.

4. Between which two times was the smallest change in temperature?