Maths Week 5

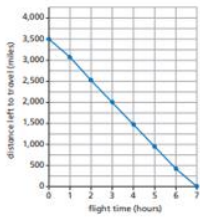## Monday

Aut5.7.1 – Use line graphs to solve problems on Vimeo

1 This graph shows how many miles an aeroplane has left to travel each hour on its journey from London to New York.


a) How many hours is the flight?

b) How many miles is the journey from London to New York?

c) After 4 hours, how many more miles are left to travel?

d) How long does it take to fly the final 1,000 miles?

e) How many miles does the plane travel between 2 hours and 4 hours into the flight?

f) Estimate how far the plane has travelled after 3 hours and 30 minutes.

2 The graph shows the rainfall in the first 8 days in October.
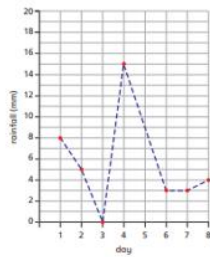
a) How many millimetres of rain fell on the 7th October?

b) It rained every day in the first 8 days in October.

Is this statement correct?

Explain your answer.

c) The record amount of rainfall for October is 2.5 cm.

Has a new record been set?

Explain your answer.

3 This graph shows the conversion between miles and kilometres
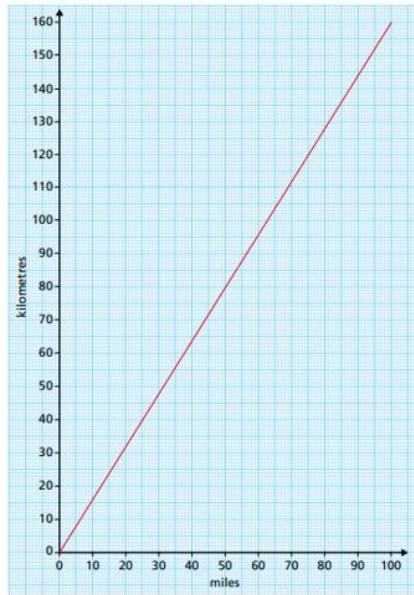
a) How many kilometres are there in 50 miles?

b) How many miles are there in 130 km?

c) Explain to a partner how you worked out the answers to part a) and b).

d) Eva cycles 60 miles.

Dexter cycles 80 km.

Who cycles the furthest?

How much further does the person cycle?

e) Ron wants to convert 800 km into miles.

I can't do it because my graph doesn't go high enough.

Ron is incorrect. Explain why.

Complete the conversion.

Show your working.

800 km = [ ] miles

f) A high-speed train can travel up to 400 km in an hour.

How many miles can it travel in an hour?

Extension

Extension activity:

Encourage the children to collect their own data and present it as a line graph. As this objective is taken from the science curriculum, it would be a good idea to link it to investigations. Possible investigations could be:

- Measuring shadows over time
- Melting and dissolving substances
- Plant growth

Here is a table of data.

Time (min)	15	30	45	60	75
Distance (km)	25	46	67	72	98

Which intervals would be the most appropriate for the vertical axis of the line graph?
Explain your answer.

Rosie has used the data in the table to plot the line graph.

Time	11:00	11:20	11:40	12:00	12:20	12:40	13:00
Height above ground (m)	0	180	150	200	210	120	0
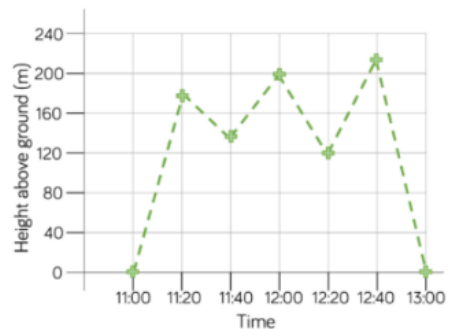
What mistakes has Rosie made?
Can you draw the line graph correctly?

1 The table shows the weight of five dogs, to the nearest kilogram.

Name of dog	Buster	Misty	Titch	Henry	Patch
Weight	12 kg	26 kg	14 kg		

a) What is the total weight of Buster and Titch?

b) Henry is 10 kg heavier than Misty. What is Henry's weight?

c) Patch is heavier that Titch but weighs less than Misty.

Write the dogs names in order of weight, starting with the lightest.

2 The table shows the number of children in each year at a primary school.

Year	1	2	3	4	5	6
Number of children	28	31	29	25	32	

There are 175 children in the school in total.

How many children are in Year 6?

4 Teachers asked children how they travel to school.

The tables show how the children in Year 4 and Year 5 travel to school.

Year 4

Method of travel	Walk	Bike	Car	Bus
Number of children	18	1	10	0

Year 5

Method of travel	Walk	Bike	Car	Bus
Number of children	17	3	7	1

a) What is the most common method of travel in both year groups?

b) How many more children travel by car in Year 4 than in Year 5?

c) Which year has the most children?

d) Tommy thinks that Year 5 children cause less pollution than Year 4, getting to school.

Is Tommy correct?

5

The table shows information about the eye colour of 100 people.

	Brown	Blue	Green	Total
Boys	12	25		70
Girls			8	
Total	29			100

a) Complete the table.

b) How many boys have green eyes?

c) How many girls have blue eyes?

d) How many more girls have brown eyes than blue eyes?

6 Teams are awarded points for each event at a swimming gala. Some of the scores have accidentally been washed off!

	Breaststroke	Backstroke	Butterfly	Freestyle	Total
Yellow	405		210	395	1,970
Red	650	420		650	
Green	210		400		1,480
Blue		210	610	510	
Total	1,610		1,430	1,925	

Work out the missing scores and complete the table.

7 The table shows information about some of the world's tallest buildings.

Building	Country	Height (m)	Number of floors	Year completed
Burj Khalifa	UAE	828	163	2010
Shanghai Tower	China	632	128	2015
Abraj Al-Bait Clock Tower	Saudi Arabia	601	120	2012
Ping An Finance Centre	China	599	115	2017
Goldin Finance 117	China	597	128	2019

a) How tall is the tallest building?

b) Which building is 601 m tall?

c) Which two buildings have the same number of floors?

d) Which building was completed most recently?

Extension

<table>
<tr><td colspan="2">Extension activity:</td></tr>
</table>

	100 m sprint (s)	Shot put (m)	50 m Sack race (s)	Javelin (m)
Amir	15.5	6.5	18.9	11.2
Dora	16.2	7.5	20.1	13.3
Teddy	15.8	6.9	19.3	13.9
Rosie	15.6	7.2	18.7	14.1
Ron	17.9	6.3	18.7	13.3

Ron thinks that he won the 100 m sprint because he has the biggest number.

Do you agree?
Explain your answer.

This table shows the 10 largest stadiums in Europe.

Stadium	City	Country	Capacity
Camp Nou	Barcelona	Spain	99,365
Wembley	London	England	90,000
Signal Iduna Park	Dortmund	Germany	81,359
Santiago Bernabeu	Madrid	Spain	81,044
San Siro	Milan	Italy	80,018
Stade de France	Paris	France	80,000
Luzhniki Stadium	Moscow	Russia	78,300
Ataturk Olimpiyat Stadium	Istanbul	Turkey	76,092
Old Trafford	Manchester	England	75,811
Allianz Arena	Munich	Germany	75,000

True or False?

- The fourth largest stadium is the San Siro.
- There are 6 stadiums with a capacity of more than 80,000
- Three of the largest stadiums are in England.

Wednesday: Aut5.7.4 - Timetables on Vimeo

1 Here is the Saturday timetable for the main pool at a local leisure centre.

1	Swimfit	2	Lane Swimming	3	Family Swim
4	Children's Swimming Lessons	5	Swim For All
6	Fun Swim: Under 14s Only	8	Adult Swimming Lessons

a) Is this true or false?
The Family Swim session starts at 9 o'clock in the morning.

b) How long does the Swimfit session last?

c) During the day how much time is allocated to Swim for All sessions?

d) Why is the time between 9:00 and 12:00 divided into two?

3 Here is part of a bus timetable showing the journey from the bus station to the train station.

	1st bus	2nd bus
Bus station	10:30	12:15
High Street	10:42	12:27
Green Lane	10:45	12:30
School	10:56	
Four Lane End	11:07	
Library	11:12	
Train station	11:25	

It takes the 2nd bus the same time to travel between each stop.
Complete the timetable.

4 This is the train timetable from Leeds to London.

Leeds	12:15	12:45	13:15	13:45	14:15
Wakefield	12:28	12:58	13:28	13:58	14:28
Doncaster	12:47	13:19	13:47	14:19	14:47
Grantham	13:18	——	14:18	——	15:18
Peterborough	——	14:10	——	15:10	——
Stevenage	14:04	——	15:04	——	16:04
London	14:31	15:01	15:31	16:01	16:31

a) What time does the 12:45 from Leeds arrive in London?

b) How long does the 13:58 train from Wakefield take to get to London?

c) At which stations does the 14:15 train stop?

d) How long does it take to get from Grantham to Stevenage?

e) If you arrive in Grantham at 13:30, how long will you need to wait before the next train to London?

Extension

Extension activity:

NatureWatch		NatureWatch +1		QuizTime		Cookery Channel	
5 p.m.	News	5 p.m.	Puppy Playtime	5 p.m.	Talk the Talk	5 p.m.	Cheese Please
5:30 p.m.	Weather	6 p.m.	News	5:30 p.m.	Quizdom	6 p.m.	Cook with Lydia
5:45 p.m.	Deep Blue	6:30 p.m.	Weather	6 p.m.	What's the Q?	6:30 p.m.	Pizza Pasta Pietro
6 p.m.	Pampered Pets	6:45 p.m.	Deep Blue	6:30 p.m.	aMAZEment	6:45 p.m.	5 Minute Menu
7 p.m.	Safari	7 p.m.	Pampered Pets	7:30 p.m.	Buzzed Out	7 p.m.	Budget Baker
8:15 p.m.	Animal Antics	8 p.m.	Safari	8 p.m.	Guess the Noise	8 p.m.	Lots of Lollies
9:15 p.m.	Worldly Wonders	9:15 p.m.	Animal Antics	9 p.m.	Dance & Decide	9:15 p.m.	Biscuit Bites

Ron wants to watch the following TV programmes: Cheese Please, What's the Q, aMAZEment, Budget Baker, Safari, Dance & Decide.
Will Ron be able to watch all the shows he has chosen?

It is 18:45. How long is it until 'Guess the Noise' is on?

Here is Rosie's weekly timetable from secondary school.

Y7CM	Daily Assembly (09:00 - 09:15)	1 09:15 - 09:55	2 09:55 - 10:45	Break (10:45 - 11:05)	3 11:05 - 11:55	4 11:55 - 12:45	Lunchtime (12:45 - 13:45)	5 13:45 - 14:35	6 14:35 - 15:25
Monday		Literacy	English		Maths	I.C.T.		P.S.H.C.E.	Geography
Tuesday		English	Art		French	Science		D.T.	
Wednesday		Literacy	D.T.		Art	Drama		I.C.T.	Science
Thursday		P.E.	Maths		R.E.	English		History	P.S.H.C.E.
Friday		Literacy	Maths		Art	Science		P.E.	

True or False?

- Rosie has 2 hours and 20 minutes of PE in a week.
- Rosie has 130 minutes of literacy in a week.
- Rosie does Art for the same length of time as Maths each week.
- Rosie does Art for the same length of time as English each week.

<u>Thursday</u>

Mini Assessment – resource on website.

Friday - Arithmetic (Lesson on website)

1. Add together 38 and 45. _____

2. Calculate the difference between 28 and 65. _____

3. What is the total of 12, 35 and 49?   _____

4. How much less is 34 than 72? _____

5. Subtract 38 from 51.   _____

1. Jamie has 45p and Tarek has 36p. How much do they have altogether?

_____

2. Liam has £2.50. He buys a present for his mum for 75p. How much does he have left?

_____

3. A teacher collects all the pencils in the classroom. He collects 45 pencils from the floor and adds them to the 37 pencils he has in the cupboard. How many pencils are there altogether?

_____

4. There are 36 tennis balls in the PE store. Last week, there were 61 tennis balls. How many are missing?

_____

5. It takes 35 minutes for a cake to bake in the oven. The cake has been in the oven for 18 minutes. How much longer before the cake is cooked?

_____

Extension

1 Mental Maths

Solve these problems in your head:

A

Add together 50p, 60p and 20p.

_____

B

What is the total of 25, 17 and 33?

2 Mental Maths

Solve these problems in your head:

A

Lauren was given some money for her birthday. Her brother gave her £3.50, her sister gave her £2.00 and her grandma gave her £2.50. How much did she get in total?

_____

B

Omar collects 66 bus tickets and 22 train tickets. How many tickets does he have in total?