

19.06.20

WALT solve problems using line graphs

Notes and Guidance

Once children can read, interpret and draw lines graphs they need to be able to use line graphs to solve problems.

Children need to use their knowledge of scales to read information accurately. They need to be exposed to graphs that show more than one set of data.

At this point, children should be secure with the terms x and y axis, frequency and data.

Mathematical Talk

What do you notice about the scale on the vertical axis? Why might it be misleading?

What other scale could you use?

How is the information organised? Is it clear?

What else does this graph tell you? What does it not tell you?

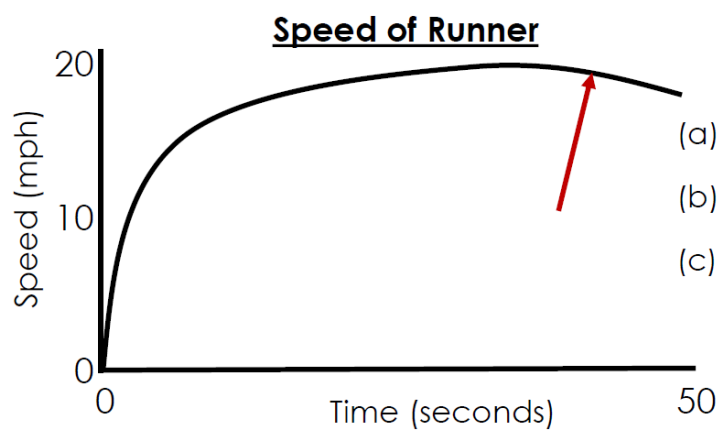
How can you calculate _____?

Why would this information be placed on a line graph and not a different type of graph?

Which answer?

This graph shows the speed of a 400m runner.

What is happening at the point showed by the arrow?



- (a) The runner's fastest speed
- (b) The runner finishes
- (c) The runner slows down

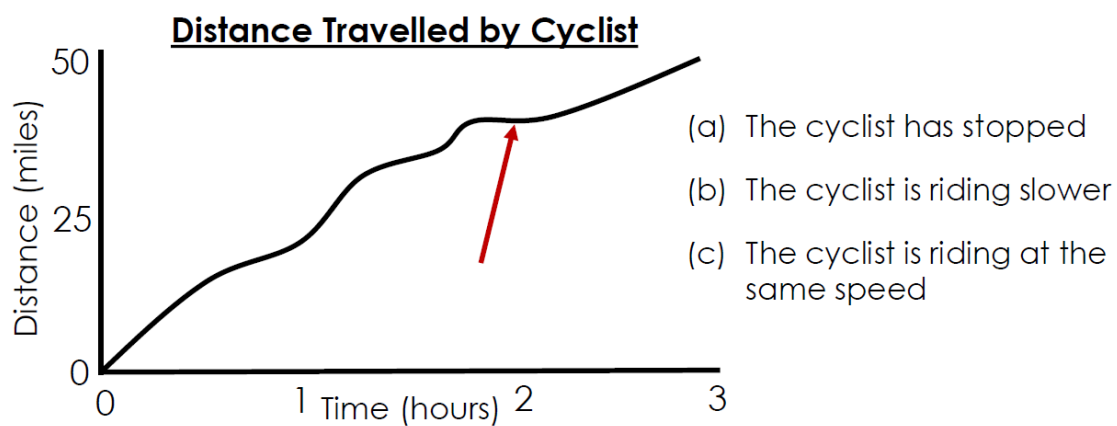
Answer

C - the runner slowing down because the speed is decreasing but time is moving forward.

Which answer?

This graph shows the distance travelled by a cyclist.

What is happening at the point showed by the arrow?

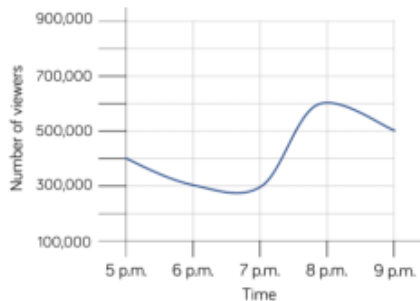


Answer

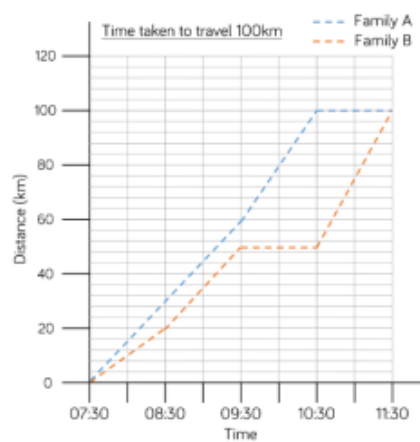
B - the rider has stopped because the distance travelled doesn't change. The line is horizontal.

Varied Fluency

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.



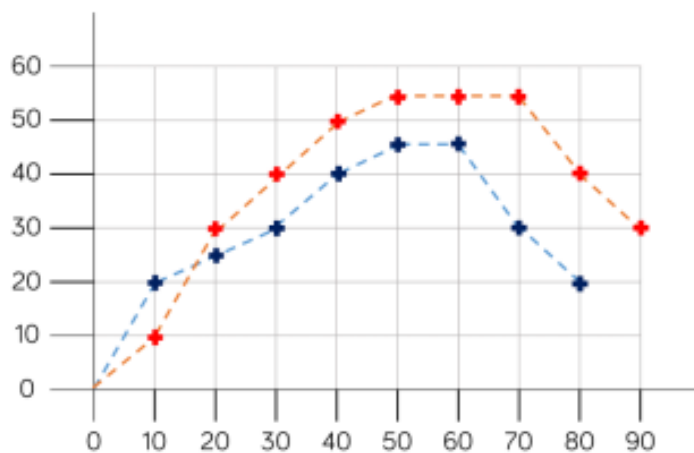
What was the difference between the number of viewers at the start of each programme? What was the difference in the number of viewers between 6 p.m. and 8 p.m.? Which time had twice as many viewers as 6 p.m.?



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?

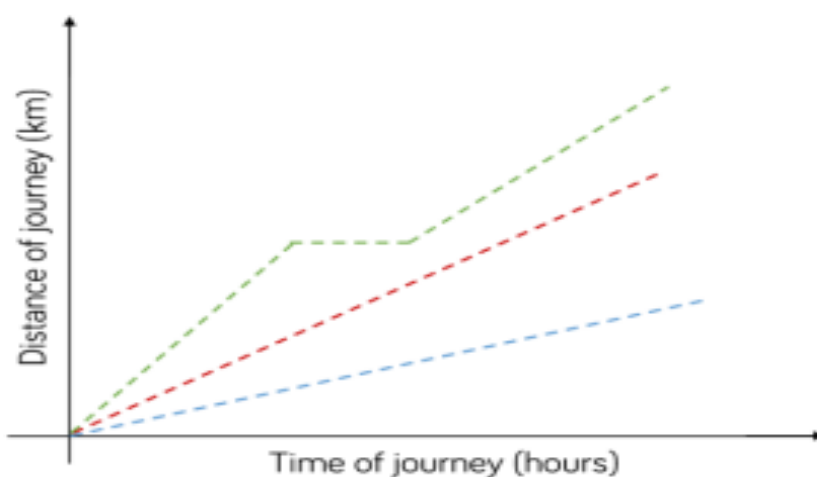
What could this graph be showing?



Label the horizontal and vertical axes to show this.

Is there more than one way to label the axes?

The graph below shows some of Mr Woolley's journeys.



What is the same and what is different about each of these journeys?

What might have happened during the green journey?