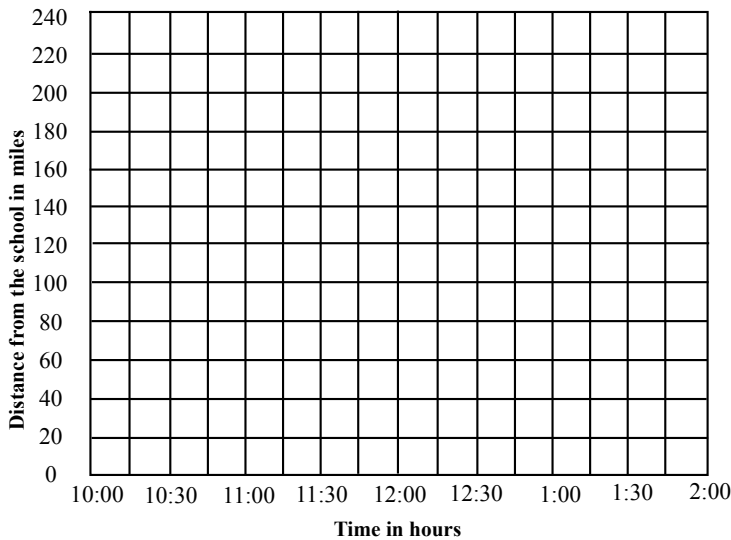# MathFLIX CHALLENGE

## *Graphing to solve distance & time problems*

Our class visited Eastern Illinois University last semester and this is a description of the bus journey. We left school at 10:00 am. We traveled for one half hour at forty miles per hour then for one hour at fifty miles an hour. We had one half hour stop for lunch then we traveled for two hours at fifty-five miles an hour.

1. Complete this table showing the distances traveled by the end of each stage of the bus trip.

| Time in hours  (x) | 10:00 | 10:30 | 11:30 | 12:00 | 2:00 |
|---|---|---|---|---|---|
| Distance from home in miles (y) | | | | | |

2. Draw a distance-time graph for our class bus trip to Eastern Illinois University on the grid below and answer the questions.



**What does the x-axis represent?** ————

Are the intervals equal?  ————

What are the intervals?  ————

**What does the y-axis represent?** ————

Are the intervals equal?  ————

What are the intervals?  ————

3. We left at 10:00.

   Use a dot to mark the starting point of this trip.

   What are the coordinates of the starting point of this trip?
   ————

4. We traveled for one half hour at 40 miles per hour.

   What time is it?————

   How many miles have we traveled?  ————

   What is the second coordinate?  ————

   Use a ruler to connect the first and the second coordinate.

5. The speed limit changed and we traveled for one hour at 50 miles per hour.

   What time was it? ————

   How many miles are we from school?  ————

   What is the third coordinate?————

   Use a ruler to connect the second and third coordinates.

   What is the average speed since we left school?————

6. We had a half hour stop for lunch.

   What time was it? ————

   How many miles are we from school? ————

   What is the fourth coordinate?————

   Use a ruler to connect the third and fourth coordinates.

   What is the average speed since you left school?————

7. Finally we traveled two hours at 55 miles per hour to arrive at our destination.

   What time was it?  ————

   How many miles are we from school?  ————

   What is the last coordinate?  ————

   Use a ruler to connect the fourth and last coordinates.

   What is the average speed for the bus trip? ————