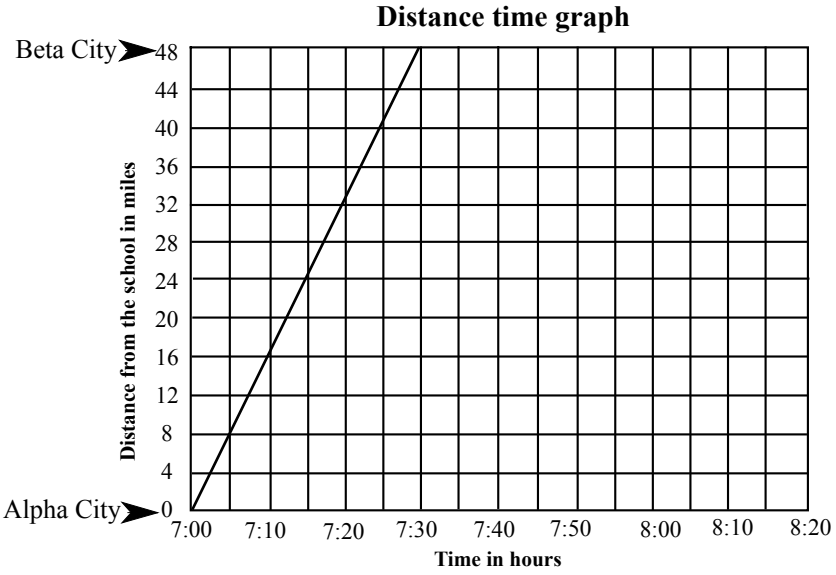
MathFLIX CHALLENGE

Understanding distance - time graphs

Study the distance time graph to answer the questions below.



1. 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?_____

2. The sloping line shows the journey from Alpha City to Beta City. The train leaves Alpha at 7:00 and arrives at Beta at 7:30.

   How far apart are the cities? _____

   How long is the trains trip? _____

   What is the average speed of the train?_____

3. Another train lives Beta City at 7:00 and arrives at Alpha City at 7:30.

   List the coordinates where the Beta City train starts? _____

   What are the coordinates of the ending point? _____

   Draw a line to show the journey of the 7:00 Beta train.

   At what time do the two trains pass each other? _____

   How many miles are they from Alpha? _____

   What is the coordinate? _____

4. Trains leave Alpha and Beta every 10 minutes during the rush hour from 7:00 – 8:00, repeating the two journeys on the graph.

   Use a ruler to draw lines to show all the trains that leave Alpha. Are these lines parallel? _____

   Are the slopes the same? _____

   Use another color to draw lines to show all the trains that leave Beta. Are these lines parallel? _____

   Are the slopes the same? _____

5. We see that the 7:00 trains meet at (7:15, 24). Each traveled for 15/30 minutes and completed half the distance or $^1/_2$ x 48.

   Which Beta trains does the 7:00 Alpha train pass?

   _____

   What time is it when the 7:00 train from Alpha meets the 7:10 train from Beta? _____

   How long has the Alpha train been traveling?_____

   How long has the Beta train been traveling? _____

   The Alpha train has traveled 20/30 or 2/3 of the distance between the two cities. What is 2/3 of 48? _____

   Name the coordinates where they meet? _____

   What time is it when the 7:00 train from Alpha meets the 7:20 train from Beta? _____

   How long has the Alpha train been traveling?_____

   How long has the Beta train been traveling? _____

   The Alpha train has traveled 25/30 or 5/6 of the distance between the two cities. What is 5/6 of 48? _____

   Name the coordinates where they meet? _____

   Where does the 7:00 Alpha train meet the 7:30 Beta train? _____