Name Date

Ford and Ferrari

This problem gives you the chance to

- *read and interpret a distance-versus-time graph*
- *sketch a possible scale map of the cities*

Two cars, a Ford Granada and a Ferrari, leave Lawrence at the same time to travel the 360 miles along Route 89 to Scotia. The following is a list of cities and their distances from Lawrence:

Name of city	Distance in miles from Lawrence
Lawrence	0
Hampsford	55
Cassapowak	90
Reading	120
New Plotz	150
Bethel	180
Mayfield	230
Glenn	270
Fonds	290
Amsterdam	310
Scotia	360

The graph on the next page represents the relationship between travel time and the locations of the two cars. The thicker line represents the Ford Granada and the thinner line represents the Ferrari.

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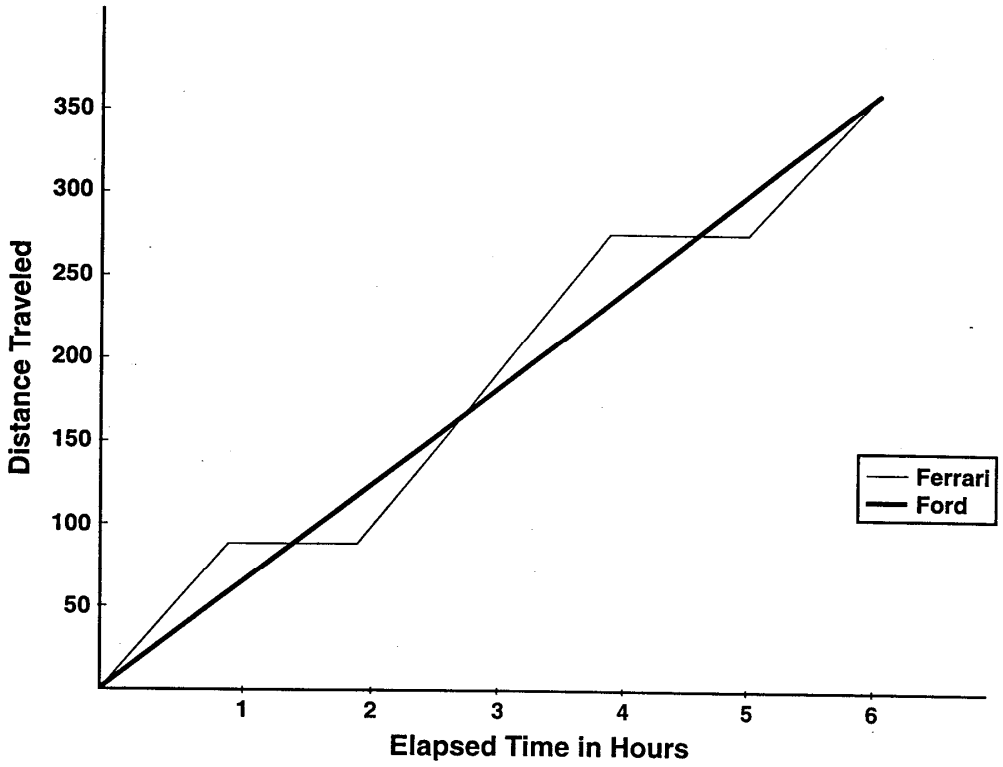
Name Date



1. At which cities did one car pass the other?

2. At which cities did each car stop and for how long?

3. Which car was moving faster during
   a. the first hour
   b. the second hour
   c. the fourth hour
   d. the sixth hour
   How do you know?

4. What was the average speed of each car over the entire trip?

5. Sketch a possible map of the area including Lawrence and Scotia, on a scale of 1 cm to 20 miles.

☆ ☆ ☆

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Task 11 A Sample Solution

1. The Ford passed the Ferrari at Cassapowak about 1.5 hours after they both began to travel (during an interval that the Ferrari was stopped). The Ferrari passed the Ford near Bethel about 3 hours into the trip. The Ford passed the Ferrari again as it was stopped at Glenn, about 4.5 hours into the trip.

2. The Ford traveled without stopping until it reached Scotia, but the Ferrari stopped at Cassapowak for an hour and at Glenn for an hour.

3. During the
   first hour— the Ferrari was faster.
   second hour—the Ford was faster.
   fourth hour—the Ferrari was faster.
   sixth hour —the Ferrari was faster.

4. Since each car was driven a total of 360 miles in a total of 6 hours, the average speed of each car was 60 miles per hour.

5. There are many possible maps that could correspond to this situation. The path need not be straight, but the map distances along the roads between towns should be:

L–H	2.75 cm
H–C	1.75 cm
C–R	1.5 cm
R–NP	1.5 cm
NP–B	1.5 cm
B–M	2.5 cm
M–G	2 cm
G–F	1 cm
F–A	1 cm
A–S	2.5 cm
total length =	18 cm