EXTRA PRACTICE — Exercises

Unit III – First Degree Relations with Two Placeholders
Part F – Problem Solving Using Two Placeholders
Lesson 5 – "Motion" Problems

For each of the following story problems, answer the four analysis questions to find the system needed to solve. Then solve and use common sense to check your answer.

1. A motorist traveling at a certain rate can go from one town to another in five hours. If he travels ten miles an hour faster, he can drive the same distance in one hour less time. How far is it between the two towns?

2. Your brother has been visiting you for the weekend from college. Five minutes after he leaves to go back to college, you discover that he forgot his books. So, you get in your car and drive to catch up to him. If your average speed is 10 mph faster than your brother's speed, and you catch him in 25 minutes, how fast did you drive? (hint: express the time in hours)

3. Two automobiles start toward each other at the same time from two cities 360 miles apart. If one automobile travles 40 miles per hour, and the other travels 50 miles per hour, how soon will they meet?

4. One automobile traveling 35 miles an hour leaves Toronto at 8:00 A.M. Another automobile traveling 50 miles an hour on the same road leaves Toronto at 10:00 A.M. How soon will the second automobile overtake the first?

5. One airplane makes a 2000-mile nonstop flight traveling 200 miles per hour. Another airplane, whose rate is 250 miles per hour, starts one hour after the first plane on the same flight. If the second airplane must stop 30 minutes to refuel at an airfield 1200 miles from the starting point, when will it overtake the first plane?

EXTRA PRACTICE — Answer Key

Unit III – First Degree Relations with Two Placeholders
Part F – Problem Solving Using Two Placeholders
Lesson 5 – "Motion" Problems

For each of the following story problems, answer the four analysis questions to find the system needed to solve. Then solve and use common sense to check your answer.

1. It is 200 miles between towns.

2. Your rate of speed must have been 60 mph

3. They will meet in 4 hours.

4. The second automobile will over take the first automobile in $4\frac{2}{3}$ hours.

5. The second plane will overtake the first plane in 6 hours.