Math 70 Section 8.3 Word Problems   Name: _____
In-class Practice Sheet

> **DIRECTIONS:** We will be solving these problems using systems of linear equations. The first two problems were done on the in-class worksheet for section 2.5 but were done using a different method. They are recopied here for comparison.

1.   If a birdwatcher saw 74 birds in one day and saw 4 more in the morning than he did in the afternoon, how many did he see in the morning?

2.   The perimeter of a rectangle is 36 feet. It's length is two feet more than its width. Find the length and the width.

3.   A bank teller has a total of 69 bills in the drawer consisting of only fives and tens. If the total value of the money is   590, how many of each denomination does she have?

4.   Two executives in cities 400 miles apart drive to a business meeting at a location between their cities. They meet after 4 hours. Find the speed of each car if one car travels 20 miles per hour faster than the other car.

5.   A merchant wishes to mix candy worth 5 dollars per pound with 40 pounds of candy worth 2 dollars per pound to get a mixture that can be sold for 3 dollars per pound. How many pounds of the 5-dollar-per-pound candy should be used?

6.   A 90% antifreeze solution is to be mixed with a 75% solution to make 120 liters of a 78% solution. How many liters of the 90% and 75% solutions will be used?

7.   A boat takes 3 hours to go 24 miles upstream. It can go 36 miles downstream in the same time. Find the speed of the current and the speed of the boat in still water if s represents the speed of the boat in still water and c represents the rate of the current.

8.   Two trains leave a city at the same time. One travels north and the other travels south at 20 miles per hour faster. In 2 hours the trains are 280 miles apart. Find their speeds.

9.   With income earned by selling the rights to his life story, an actor invests some of the money at 3% and 30,000 dollars more than twice as much at 4%. The total annual interest earned from the investments is 56,000 dollars. How much is invested at each rate?