

### 4.3 In-class Practice

1. The width of a rectangular lot is 75% of its length. If the perimeter is 700 meters, then what are the length and width?
2. Two supplementary angles are such that one angle is  $12^\circ$  less than three times the other. Find the measures of the angles.
3. A couple budgets one-third of their monthly income for their rent and their car payment. The difference between the rent and the car payment is \$802. The couple's monthly income is \$4494. What is the couple's monthly rent and car payment?
4. Winborne has 35 coins consisting of dimes and nickels. If the value of his coins is \$3.30, then how many of each type does he have?
5. Christina makes a \$9.25 purchase at a bookstore in Reno with a \$20 bill. The store has no bills and gives her the change in quarters and dollar coins. There are 19 coins in all. How many of each kind are there?
6. Two hundred people were on a charter flight to Las Vegas. Some paid \$200 for their tickets and some paid \$250. If the total revenue for the flight was \$44,000, then how many tickets of each type were sold?
7. Jed's student loans totaled \$16,200. Part was a Perkins loan made at 5% interest and the rest was a Stafford loan made at 4% interest. After one year, Jed's loans accumulated \$715 in interest. What was the amount of each loan?
8. Doug has \$100,000 to invest. He is looking at a risky gold fund that is expected to return 30% and a stock index fund that is expected to return 8% in the next year. If he wants a 15% return on his money, then how should he invest his money?
9. Soybean meal is 16% protein and corn meal is 9% protein. How many pounds of each should be mixed to get a 350-lb mixture that is 12% protein?
10. A chemist wants to mix a 5% acid solution with a 25% acid solution to obtain 50 liters of a 20% acid solution. How many liters of each solution should be used?
11. Your brother leaves your home on a trip, forgetting his suitcase. You know that he normally drives at a speed of 55 mph. You do not discover the suitcase until 1 hr after he has left. If you follow him at a speed of 65 mph, how long will it take you to catch up with him?
12. A Coast-Guard patrol boat travels 4 hr on a trip downstream with a 6-mph current. The return trip against the same current takes 5 hr. Find the speed of the boat in still water.
13. Donna is late for a sales meeting after traveling from one town to another at a speed of 32 mph. If she had traveled 4 mph faster, she could have made the trip in hr less time. How far apart are the towns?