Section 3.3   Focus Exercises

| You may need to do each of these on your own paper. |

Instructions: For each, *solve the application.*

 a)   *Set up the legend;*

 b)   *draw any necessary diagrams;*

 c)   *identify the formula;*

 d)   *set up a chart;*

 e)   *solve the equation; and*

 f)   *write a sentence answering the question.*

1.   Sam got a score of 82 (out of 100 points possible) on his first algebra test. After he took the second test his average score was 87. How many points did Sam get on his second test?

2.   Anthony received scores of 87 points and 85 points on his first two tests. His goal, by the end of the third test, is to have an average grade of 90 points. How many points will Anthony need to score on his third test to reach his goal?

3. Kahlil had to deliver a package to the other side of Los Angeles. He had to drive only 42 miles, but his trip took him through downtown L. A., and he got stuck in some pretty heavy traffic. Believe it or not, it took him one-and-a-half hours to get there. What was his average rate of speed for the journey?

4. Lisa is planning to plant a garden right near the tool shed in her back yard. Her plan is to make it rectangular so that one side (the length) is the same as the length of the shed, which is 18 feet. She's planning to use the 50 feet of chicken wire currently in the shed to completely surround (as a perimeter) the garden. What does the width of the garden need to be so that she can use all 50 feet of fencing?

5. Maurice, the barber, has a few different retirement investments. When he turned 70, he decided to cash in two of them. He received $10,000 more from his Pepsi stock than from his McDonald's stock, for a total of $92,000. How much did he received from each investment?

6. Mrs. Lacey has two grown children, Larry and Phyllis, the only heirs of their mother's entire fortune. Mrs. Lacey's will states that Larry is to receive two-thirds as much as Phyllis receives at the unfortunate time of their mother's passing. Larry is just too curious about how much he'll be receiving (maybe this is why he isn't getting as much as his sister), but he doesn't know how much the estate will be worth. Just a guess, but if Mrs. Lacey's estate is worth $80,000 at the time of her passing, how much will each of her children receive as an inheritance?

7. In a triangle, one of the angles is $90°$. The measure of the smallest angle is one-fourth the measure the middle angle. What are the measures of the other angles?

8. April has, after two tests, an average score of 81. If her second tests score was 12 points higher than her first test score, how many points did she score on each test?

9. Lucas makes crosses out of a scrap piece of wood by cutting it into two pieces. He always makes the cut so that the cross piece is one-third the length of the vertical piece. If a length of scrap wood is 28 inches, what will be the length of each piece of the cross?

10. Henry has no children, but he's getting on in years, and his health is starting to fail him. In deciding how to distribute his wealth after his passing, he reflects on the involvement in his life of his three nieces, Janet, Nancy and Jolene. He decides to give Janet $10,000 more than he gives Nancy and to give Jolene twice as much as he gives to Janet. (Apparently, those birthday cards from Jolene paid off; it also didn't hurt that she usually let him win at cribbage.) If Henry's estate is worth $98,000 when he passes on, how much will each niece receive from his estate?

11. In a triangle, the measure of the largest angle is twice the measure of the smallest angle. The measure of the middle angle is 20° more than the measure the smallest angle. What are the measures of the three angles?

12. The three angle measures in a triangle are such that the measure of the largest angle is three times the measure of smallest angle; the middle angle is 30° less than the measure of the largest angle. What are the measures of the three angles?