Section 1.2

1) This example will help you do exercises 51-54 on p. 21. The approximate annual interest rate $A$ of a loan paid off with monthly payments is given by

$$A = \frac{24f}{b(p + 1)}$$

where $f$ is the finance charge on the loan, $p$ is the total number of payments, and $b$ is the original balance of the loan. If $A = 11\%$, $f = \$400$, and $p = 36$, find $b$ to the nearest whole number.

2) This example will help you do exercises 57-60 on pp. 21-22. The length of a rectangle is 8 inches less than twice its width. If the perimeter is 50 inches, find the width.

3) This example will help you do exercises 65-68 on p. 22. Maria invested her $10,000 inheritance in two ways: some at 5\% interest and some at 3\% interest. Altogether, she makes $460 per year interest. How much did she invest at 5\%?

4) This example will help you do exercises 69-70 on p. 22. After deductions for taxes, retirement, health insurance, and a dental plan, Willie’s net weekly income is $594. If the deductions total 34\% of his gross weekly income, what is his gross weekly income?

Section 2.1

1) What do the coordinates of all the points on the x-axis have in common?

2) What do the coordinates of all the points on the y-axis have in common?

3) Find the x-intercept and y-intercept of the graph of $2x - 3y = 12$.

4) Determine whether $\left(\frac{-2}{3}, 2\right)$ is a solution of $4x + 6y = 11$.

5) The weekly revenue and costs for the Westco Widget Company are shown in the graph.

   a) Determine the weekly costs if 10,000 widgets are manufactured.
   b) Determine the weekly revenue if 10,000 widgets are manufactured.
   c) Determine the weekly profit (or loss) if 10,000 widgets are manufactured.
   d) For what weekly production totals will the company break even?
   e) What is the largest number of widgets that can be manufactured without losing money?