Chapter 11 – 20 Review

1. Solve for x by completing the square.

$$x^2 - 2x - 11 = 0$$

2. Complete the square by finding the last term.

$$x^2 - 3x + \underline{}$$

3. Find the roots using the quadratic equation when necessary.

$$20x^2 + 40x = 30$$

4. Tell the nature of each solution using the discriminant, the solve to find the exact root.

$$7x^2 - 3x = 20$$

5. A used car sold for $2650. The dealer made a profit of 15%. What was the original cost?

6. The price of the food at the restaurant came to $85.50. If the tax was 5.4% of that amount and the tip was 15% what was the total amount spent?

7. $x = \dfrac{y}{w + i}$, solve for i, ~~the~~ and solve for y

8. A class had 42 students. Boys outnumbered girls 4 to 3. How many boys were present?

9. 95 kilometers^2 = _____ m^2

10. 580 decigrams = _____ kg

11. 21 kg = _____ lb

12. Two trains were scheduled between Lancaster and Philadelphia. One train averaged 45 mph and the other averaged 35 mph. The second train took .4 hours longer to make the run. How far is it between stations.

13. Seth began the 500 mile race at 130 mi/hour, then slowed to 110 mph. If he drove 3 times as long at 130 mph at each rate?

14. FIND THE SLOPE, INTERCEPT, write both forms of the equation and graph the line.

   a. (3, -6) ; (0, 0)

   b. Slope -5 through the point (2, 6)