MAT 171 Homework Section 1.5 Quadratic Equations **Name _____**

Solve each equation by factoring:

1. $x^2 - 3x - 10 = 0$

2. $x^2 = 8x - 15$

3. $3x^2 - 2x = 8$

Solve by the square root property:

4. $5x^2 + 1 = 51$

5. $3(x-4)^2 = 15$

6. $(x-3)^2 = -5$

Solve by completing the square:

7. $x^2 - 2x = 2$

8. $x^2 - 6x - 11 = 0$

9. $3x^2 - 2x - 2 = 0$

Solve by using the quadratic formula:

10. $x^2 + 5x + 3 = 0$

11. $4x^2 = 2x + 7$

Solve by the method of your choice:

12. $\frac{1}{x} + \frac{1}{x+2} = \frac{1}{3}$

Use the Pythagorean Theorem and the square root property to solve the problem. Express the answer in simplified radical form. Then find a decimal approximation to the nearest tenth.

13. A rectangular park is 4 miles long and 2 miles wide. How long is a pedestrian route that runs diagonally across the park?