Name _____ Class _____ Date _____

Practice 10-6

Using the Quadratic Formula

Use the quadratic formula to solve each equation. If the equation has no real solutions, write *no real solutions*. If necessary, round to the nearest hundredth.

1. $3x^2 + 7x + 2 = 0$
2. $x^2 + 3x + 2 = 0$
3. $4y^2 = 3 - 5y$
4. $2 = 11z - 5z^2$
5. $x^2 + 5x = 6$
6. $-3x^2 + x + 5 = 0$
7. $x^2 = 3x + 4$
8. $-4x^2 + x + 7 = 0$

9. A rectangular painting has dimensions x and $x + 10$. The painting is in a frame 2 in. wide. The total area of the picture and the frame is 900 in.^{2}. What are the dimensions of the painting?

10. A ball is thrown upward from a height of 15 ft with an inital upward velocity of 5 ft/s. Use the formula $h = -16t^2 + vt + s$ to find how long it will take for the ball to hit the ground.

11. Your community wants to put a square fountain in a park. Around the fountain will be a sidewalk that is 3.5 ft wide. The total area that the fountain and sidewalk can be is 700 ft^2. What are the dimensions of the fountain?

12. The Garys have a triangular pennant of area 420 in.^{2} flying from the flagpole in their yard. The height of the triangle is 10 in. less than 5 times the base of the triangle. What are the dimensions of the pennant?