Name _____ Quadratic Equation Word Problems

1. Emily is planting flowers in her garden. If she arranges the flowers in rows and plants x flowers in each row, and she has a total of 25 flowers, how many rows of flowers does she have?

2. Jack is building a rectangular garden fence. If the length of the fence is x+3 meters and the width is x meters, and the total length of the fence is 20 meters, what are the dimensions of the garden?

3. Mia is selling homemade cookies at a bake sale. If she sells each cookie for $1 and sells x cookies, but also gives a $5 discount for buying more than 10 cookies, how many cookies did she sell if she earned $15?

4. Ethan is arranging tiles in a square pattern on his patio. If each side of the square measures x+2 feet and the total area of the patio is 64 square feet, what's the length of each side of the square?

5. Sophia is throwing a ball against a wall. If the height h (in meters) of the ball above the ground at time t seconds is given by the quadratic equation $h(t) = -2t^2 + 8t + 5$, when does the ball hit the ground?

6. Lucas is baking a cake. If the cost of the ingredients for the cake is $5 and he spends an additional $2 on decorations, and the total cost is $20, how many cakes did he bake?

7. Olivia is selling tickets to a movie. If she charges $8 per ticket and sells x tickets, and her total revenue is $160, how many tickets did she sell?

8. Daniel is a farmer planting rows of vegetables. If he plants x rows of carrots and x - 2 rows of tomatoes, and he plants a total of 10 rows, how many rows of each vegetable did he plant?

9. Sarah is organizing a fundraiser. If she needs x volunteers for setup and 2x volunteers for the event, and she needs a total of 15 volunteers, how many volunteers does she need for setup?

10. Noah is launching a model rocket. If the height h (in meters) of the rocket above the ground at time t seconds is given by the quadratic equation $h(t) = -3t^2 + 12t + 8$, when does the rocket reach its maximum height?