Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **Unit #5B Solving Quadratics Review**

**Factor** (do not solve) each of the following expressions. Remember to look for GCF first!

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. The area of a rectangle is (6x2 + 11x + 4) cm2. The width is (2x + 1) cm. What is the length of the rectangle?
10. After *t* seconds, a ball tossed in the air from the ground level reaches a height of

 *h* feet given by the equation .

* 1. What is the height of the ball after 3 second?
	2. After how many seconds will the ball hit the ground?
1. A rocket carrying fireworks is launched from a hill 80 feet above a lake. The rocket will fall into lake after exploding at its maximum height. The rocket’s height above the surface of the lake is given by .

 a. How long will it take for the rocket to hit 128 feet?

 b. After how many seconds after it is launched will the rocket hit the lake?

1. A rock is dropped from the top of a tall building, 382 feet high. The path, in feet, is given by . How long after the rock is thrown is it 100 from the ground?

Solve each quadratic equation using the prescribed method.

1. 
2. 
3. 
4. 

Solve each quadratic equation using the best method.

1. 
2. 
3. 
4. 
5. 
6. 

25. The Rectangle below has an area of 8*m*2. Using the given information, find the actual dimensions.

 6*x* – 13

 *x*

26. Solve the system of equations. Be sure to find an x AND a y value.

 y = x2 – 24

 y = x - 12

Solve the inequalities in one variable.

27. *x*2 + 13*x* + 40 ≤ 0 28. 2*x*2 – 8*x* > -*x* + 4