Quadratics Review from Math 2 Follow-Up Name: _____

Complete the problems on this handout to increase your understanding of concepts from Math 2 that we will be using in this course. Use the video links provided for each problem below as well as the answer keys for the Stations and C1: Quadratics Review from Math 2 Packet found on the class website (posted under Monday, 11/5/2018) to help you improve these skills. DUE TUESDAY, NOVEMBER 13th!

Make sure you know the difference between factoring and solving by factoring!

1. I can **factor** a trinomial where a=1.
Video Tutorial: https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-quadratics-1/v/factoring-quadratic-expressions
Problem: $x^2 - 20x + 36$.

2. I can **factor** a trinomial where a≠1.
Video Tutorial: https://www.youtube.com/watch?v=Hqdj17-ul3w
Problem: $-6x^2 - 15x - 6$.

3. I can **solve** a quadratic equation where a>1 by factoring.
Video Tutorial: https://www.youtube.com/watch?v=AmbkbRa1cU0 (factoring)
https://www.youtube.com/watch?v=SDe-1lGeS0U (solving)
Problem: $10x^2 - 11x = 6$.

4. I can **factor** a difference of squares.
Video Tutorial: https://www.youtube.com/watch?v=H21qt027H48
Problems:

a) In your own words describe how you can recognize that an expression is a difference of squares.

b) In your own words describe how to factor a difference of squares WITHOUT using the diamond.

c) **Factor** $49x^2 - 144$

5. I can **solve** a quadratic equation with a perfect square trinomial by factoring.
Video Tutorial: https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-quadratics-perfect-squares/v/factoring-perfect-square-trinomials
Problems:

a) In your own words describe how you can recognize that an expression is a perfect square trinomial.

b) In your own words describe how to factor a perfect square trinomial WITHOUT using the diamond.

c) **Solve** $25x^2 - 90x + 81 = 0$ by factoring the perfect square trinomial without using the diamond.

6. I can identify the axis of symmetry without a calculator.
Video Tutorial: https://learnzillion.com/lesson_plans/6764-find-axis-of-symmetry-and-vertex
Problem: $g(x) = -2x^2 + 5x - 24$

7. I can **solve** a quadratic using the quadratic formula and leave the answer as an exact solution.
Video Tutorial: https://www.youtube.com/watch?v=3ayhvAI3IeY
Problem: $3x + 7 = 5x^2$.

8. I can sketch a graph of a quadratic without my calculator.
Video tutorial: https://www.youtube.com/watch?v=6ytGeiTENyQ
Problem: $q(x) = 3(x - 4)(2x + 5)$

9. I can **solve** a quadratic equation using a graphing calculator.
Video tutorial: https://www.youtube.com/watch?v=LplAWEWuWTU
Problem: $4x^2 - 3 = 2x$

10. I can complete the square to write a quadratic equation in vertex form.
Video tutorial: https://www.youtube.com/watch?v=UvlpKxncaRs
Problem: $g(x) = x^2 - 12x + 15$