NCM3: Quadratics Review from Math 2 Name: _____ #____

Directions: We will be factoring and solving quadratics frequently throughout this unit. Below are " **I Can…"** statements from your Math 2 coursework. You should read the I Can Statement then complete the problem in the Prove It column. Tomorrow you will check your work. If it is not correct, you need to complete the Improve It column at the indicated station.

	I can…	Prove It	Improve It
1	Factor a trinomial where a=1.	$x^2 - 2x - 24$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 1.)	Read through Factoring Quadratics using the Diamond handout. **Focus on Example One**. Then complete the problems at the station which match this "I can" statement.
2	Factor a trinomial where $a \neq 1$.	$2x^2 - 7x + 6$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 1.)	Read through Factoring Quadratics using the Diamond handout. **Focus on Example 3.** Then complete the problems at the station that focus on this "I can" statement.

3	Solve a quadratic equation by factoring.	$6x^2 + 5x = 4$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 3.)	Read the step to solving at the station then practice the two problems provided.
4	Factor a difference of squares.	$9x^2 - 36$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 2.)	Work through the multiplication problems to find the pattern then practice the two factoring problems.

5	Solve a quadratic equation with a perfect square trinomial by factoring.	$49x^2 + 112x + 64 = 0$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to Station 5.)	Work through the multiplication problems to find the pattern then practice the problem provided.
6	Identify the axis of symmetry without a calculator.	$f(x) = 3x^2 + 12x - 2$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 4.)	Read the reminder of how to find the axis of symmetry from an equation then do the two practice problems.

7	Solve a quadratic using the quadratic formula.	$3x^2 - 2 = -7x$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 6.)	Read the example using the Quadratic formula then complete problems 1 & 2.
8	Solve a quadratic equation using a graphing calculator.	$-6x^2 + 5x = -15$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 7.)	Read the instructions for finding zeros and find the zeros for three functions.

9	Sketch a graph of a quadratic without my calculator	$g(x) = -2(x+5)(x-3)$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 4.)	Complete problems 1-3 to learn how to sketch a graph without a calculator.
10	Complete the square to write a quadratic equation in vertex form.	$x^2 + 10x + 18 = g(x)$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 8.)	Read through the explanation that goes with this "I can" statement then work through problems 1 & 2. *More space on next page.

11. **HN ONLY**	Complete the square to solve a quadratic equation.	$3x^2 + 24x = -15$ Check your work: Correct_____ Incorrect_____ (If your answer is incorrect you need to go to Station 9.)	This has two parts: First read the explanation of what a perfect square trinomial is and try the practice problems. Then read the example of how to use completing the square to solve a quadratic.