

Name : _____

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Class Number: _____

**Math 105 SAMPLE Skill Quiz Version 2, Version
Chapter 6 Review**

Free Response: Solve each of the following problems. Show your work and box your final answer.

- 2 1. Factor the following polynomial completely: $n^2 - 3n - 40$

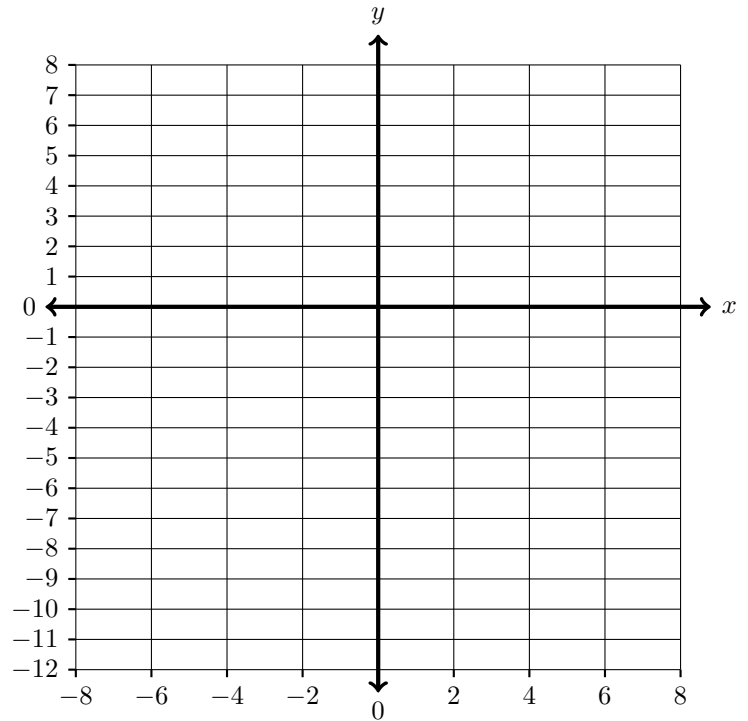
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- 2 2. Solve the quadratic equation below using an algebraic technique:

$$\frac{1}{4}(16 - x^2) = 0$$

- 5 3. Solve the quadratic equation below using a graphical technique. Make sure to demonstrate all five steps of this process. Of course, you are welcome to use your calculator. Please specifically identify each point of intersection on your graph. Also, please write each of these points as an ordered pair with an x-coordinate and y-coordinate. Make sure to finish step 5 and use this information to explicitly state the solution(s) to this algebraic equation:

$$\frac{1}{4}(16 - x^2) = 0$$

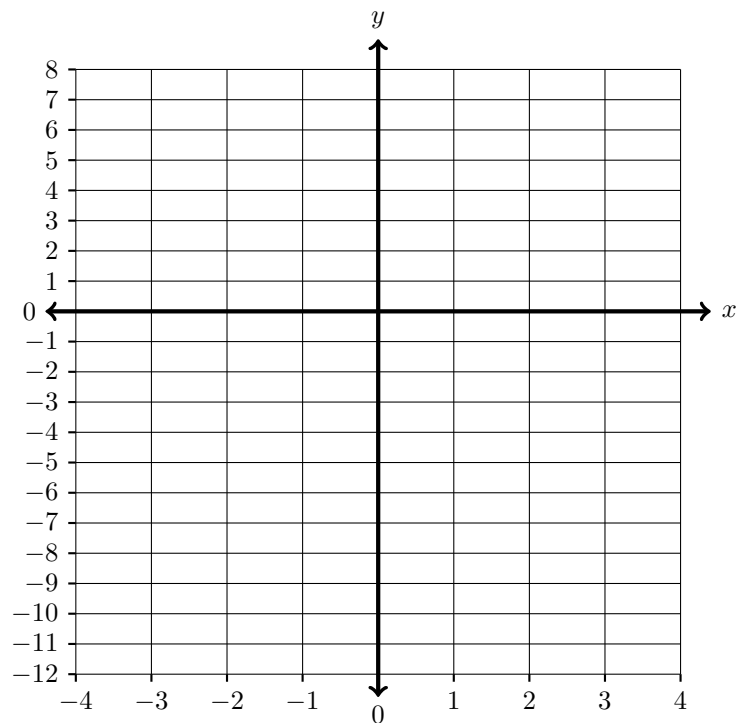
	LHS of Equation	RHS of Equation
x		
-8		
-6		
-4		
-2		
0		
2		
4		
6		
8		



- 5 4. Solve the quadratic equation below using a graphical technique. Make sure to demonstrate all five steps of this process. Of course, you are welcome to use your calculator. Please specifically identify each point of intersection on your graph. Also, please write each of these points as an ordered pair with an x-coordinate and y-coordinate. Make sure to finish step 5 and use this information to explicitly state the solution(s) to this algebraic equation:

$$2x^2 - 12 = x - 2$$

	LHS of Equation	RHS of Equation
x		
-4		
-3		
-2.5		
-2		
-1		
0		
1		
2		
2.5		
3		
4		



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- 3 5. Solve the quadratic equation below using an algebraic technique:

$$2x^2 - 12 = x - 2$$

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- 3 6. In your own words, explain the zero product property. Then, explain how to use the zero product property as an inverse operation to solve quadratic equations.