

Score \_\_\_\_\_/5 Points

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

Turned In: \_\_\_\_\_

Period: \_\_\_\_\_ Date: \_\_\_\_\_

**Advanced Algebra Homework Packet #9**

**Due: Friday, March 14<sup>th</sup>, @ 5pm**

For full credit, homework must be complete by deadline. Homework can be made-up for **half credit within 2 weeks of deadline**. After 2 weeks, no credit will be given for assignment. Homework assignments will be given 0 credit unless the reflection is completed!

1. Show your work NEATLY on a separate sheet of lined paper- work down NOT ACROSS.
2. Box your answers on your paper.
3. Put your answers in the “solution” column of this paper.

**Review Problems**

Problem	Solution	Problem
1. Factor and find the x-intercepts $y = x^2 + 4x - 77$	Factored form:  Intercepts:	<p>For the following problems, keep in mind that you already know how to do the math, it just may look different from what you’ve seen so far, so spend some time figuring out what the question is asking. You will find that you know how to do the math.</p> <p>7. <b>Which is a factor of <math>x^2 - 11x + 24</math>?</b></p> <p style="margin-left: 20px;"><b>A</b> <math>x + 3</math></p> <p style="margin-left: 20px;"><b>B</b> <math>x - 3</math></p> <p style="margin-left: 20px;"><b>C</b> <math>x + 4</math></p> <p style="margin-left: 20px;"><b>D</b> <math>x - 4</math></p> <p>8. <b>What are the solutions for the quadratic equation <math>x^2 + 6x = 16</math>?</b> hint: put in standard form first.</p> <p style="margin-left: 20px;"><b>A</b> <math>-2, -8</math></p> <p style="margin-left: 20px;"><b>B</b> <math>-2, 8</math></p> <p style="margin-left: 20px;"><b>C</b> <math>2, -8</math></p> <p style="margin-left: 20px;"><b>D</b> <math>2, 8</math></p> <p>9. hint: think about techniques from application problems <b>What is the equation of the line that has a slope of 4 and passes through the point <math>(3, -10)</math>?</b></p> <p style="margin-left: 20px;"><b>A</b> <math>y = 4x - 22</math></p> <p style="margin-left: 20px;"><b>B</b> <math>y = 4x + 22</math></p> <p style="margin-left: 20px;"><b>C</b> <math>y = 4x - 43</math></p> <p style="margin-left: 20px;"><b>D</b> <math>y = 4x + 43</math></p>
2. Factor and find the x-intercepts $y = 10x^2 - 21x - 10$	Factored form:  Intercepts:	
3. Find the “roots” or x-intercepts using the quadratic formula. $y = 2x^2 + x - 1$		
4. Find the “roots” or x-intercepts using the quadratic formula. $y = 9x^2 + 0x - 1$		
5. Find the “roots” or x-intercepts using the quadratic formula. $y = x^2 + 8x + 1$		
6. The water of the drinking fountain follows a parabolic path, traveling 3 inches and reaching a height of 2 inches. Find the equation of the ball’s path. a) Draw a picture and label 3 points b) Find the equation in vertex form c) Change the equation to standard form		

**HOMework REFLECTION (Required):** To get credit for this assignment, you must write at least a 1-paragraph reflection. You do not need to answer all of these questions; they can be used as a guideline to help you write.

- Which topic made the most sense this week?
- Which topic was the most difficult this week?
- What could you do as a student to improve if you’re having difficulty?
- If this is a review for you, were you able to help any other students in class this week?
- How much time did you spend on this assignment?
- How was your attendance, class participation, behavior, etc?

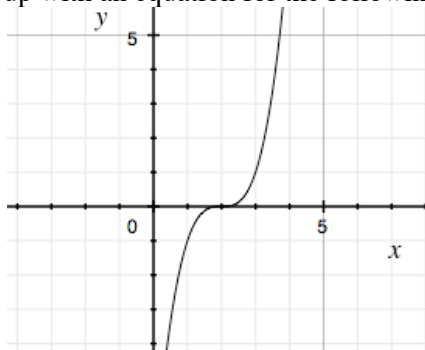
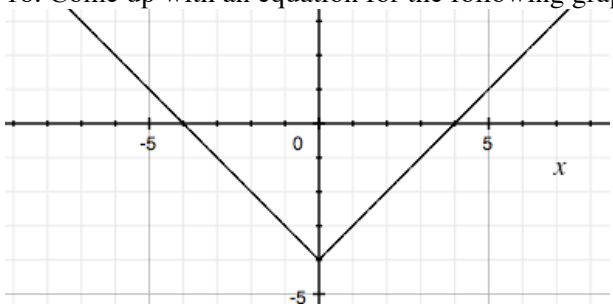
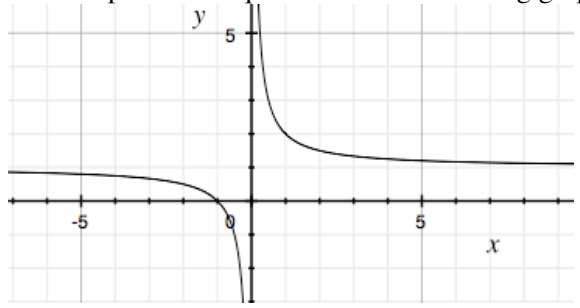
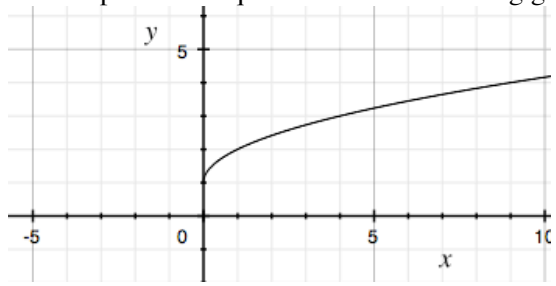
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Problem	Solution
For the problems below, use a table (and if necessary a calculator) unless the function is linear or quadratic.	
10. Graph the function and name the family it belongs to. $f(x) = x^3 - 3$	(see attached graph) Family:
11. Graph the function and name the family it belongs to. $f(x) = 2x - 1$	(see attached graph) Family:
12. Graph the function and name the family it belongs to. $f(x) = -(x - 2)^2 + 3$	(see attached graph) Family:
13. Graph the function and name the family it belongs to. $f(x) =  x + 2 $	(see attached graph) Family:
14. Graph the function and name the family it belongs to. $f(x) = \sqrt{x + 3}$	(see attached graph) Family:
15. Graph the function and name the family it belongs to. $f(x) = \frac{1}{x - 2}$	(see attached graph) Family:
16. Graph the function and name the family it belongs to. $f(x) = 2^x - 2$	(see attached graph) Family:

Problem
17. Come up with an equation for the following graph  y =
18. Come up with an equation for the following graph  y =
19. Come up with an equation for the following graph  y =
20. Come up with an equation for the following graph  y =