

Practice 3.1.3**Remember to show your work!**

3-49. Solve each of the following systems algebraically. What do the solutions tell you about the graph of each system? Visualizing the graphs may help with your description.

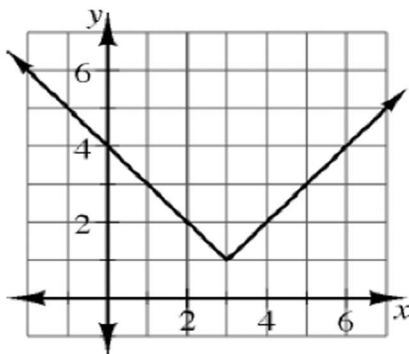
a. $y = 3x - 5$
 $y = -2x - 15$

b. $y - 7 = -2x$
 $4x + 2y = 14$

c. $y = 2(x + 3)^2 - 5$
 $y = 14x + 17$

d. $y = 3(x - 2)^2 + 3$
 $y = 6x - 12$

3-50. Examine the graph of $f(x) = |x - 3| + 1$ below. Use the graph to determine the values.



a) $f(3)$ _____

b) $f(0)$ _____

c) $f(4)$ _____

d) $f(-1)$ _____

3-51. Use the graph of $f(x)=|x-3|+1$ in problem 3-50 to solve the equations and inequalities below. It may be helpful to copy the graph onto graph paper first.

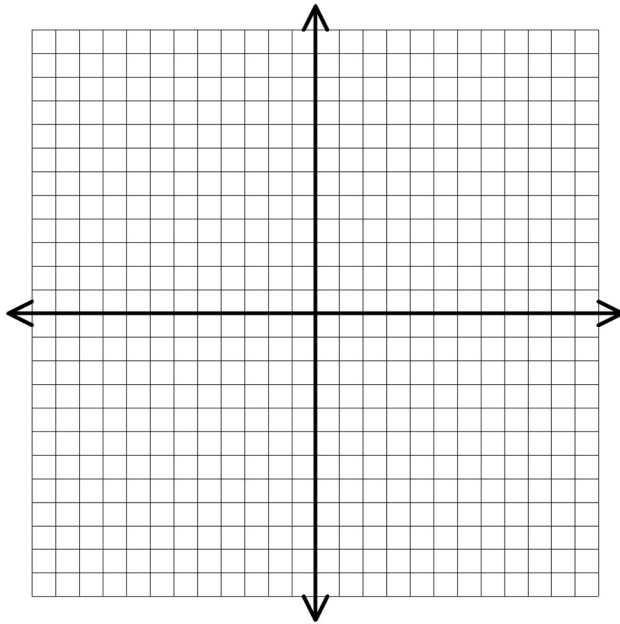
a. $|x - 3| + 1 = 1$

b. $|x - 3| + 1 \leq 4$

c. $|x - 3| + 1 = 3$

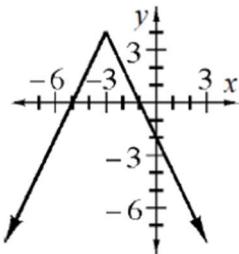
d. $|x - 3| + 1 > 2$

3-52. Graph and completely describe the function $y = 4\left(\frac{1}{x+5}\right) + 7$



Description:

3-53. Use your knowledge of absolute value functions to write the equation of the graph below.



Equation:

3-54. Determine if each of the functions below is even, odd, or neither. You can use Desmos or the tests you learned in Section 2.2.3.

a. $y = \sqrt[3]{x}$

b. $y = 9x^5 - x - 9$

c. $y = 4x^3 + 8x^7$