

Practice 3.1.1**Remember to show your work!**

3-10. Solve $(x-2)^2-3 = 1$ using Desmos. **Then** use algebraic strategies to solve the equation and verify that your graphical solutions are correct.

3-11. Solve each equation. Think about Rewriting, Looking Inside, or Undoing.

a. $2(x - 1)^2 + 7 = 39$

b. $7(\sqrt{m+1} - 3) = 21$

c. $\frac{x}{2} + \frac{x}{3} = \frac{5x+2}{6}$

d. $-7 + \left(\frac{4x+2}{2}\right) = 8$

3-12. If $f(x)=3x-9$ and $g(x)=-x^2$, determine:

a. $f(-2)$

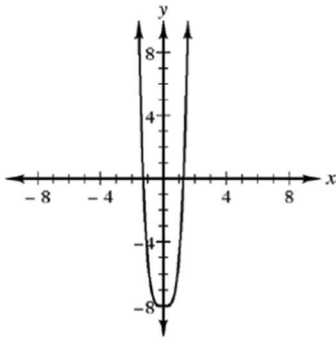
b. $g(-2)$

c. x if $f(x) = 0$

d. $g(m)$

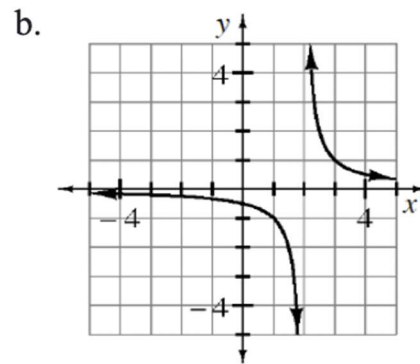
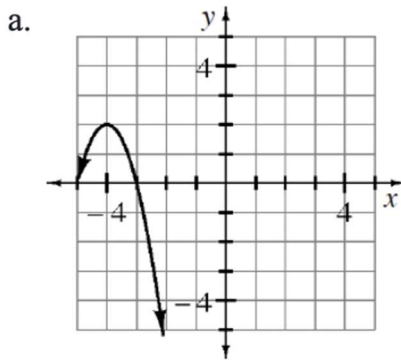
3-14. Determine if the function shown on the graph below is odd, even, or neither. Explain how you decided.

Even Odd Neither



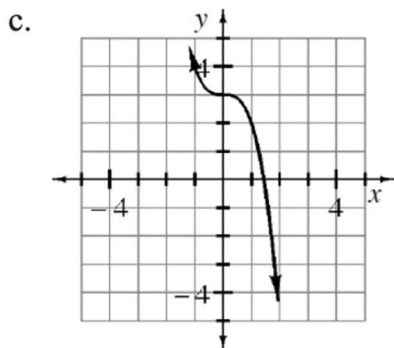
Explanation:

3-15. Write a possible equation for each graph. Remember to solve for the "a" term.



Equation: _____

Equation: _____



Equation: _____

3-21. Write equations that will shift the graph of $y = 3^x$ as described below.

a. Down 4 units

b. Right 7 units