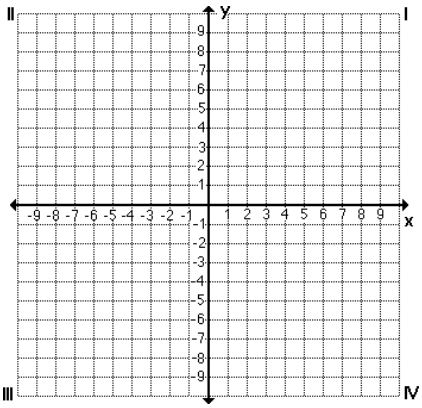
Algebra 2 Unit 2 Cumulative Review

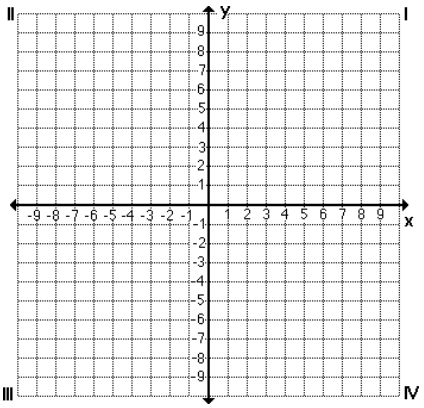
HW #33: SHOW ALL WORK on the worksheet

Graph each function. Identify the domain, range, intercepts, and end behavior

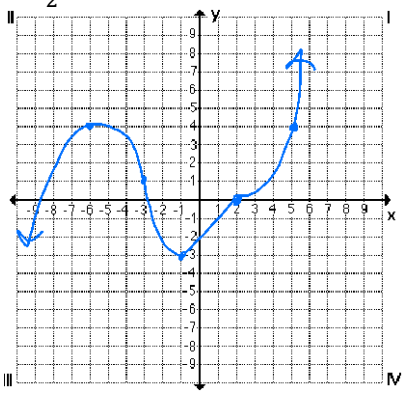
1. $f(x) = -2\sqrt[3]{x-5} + 7$



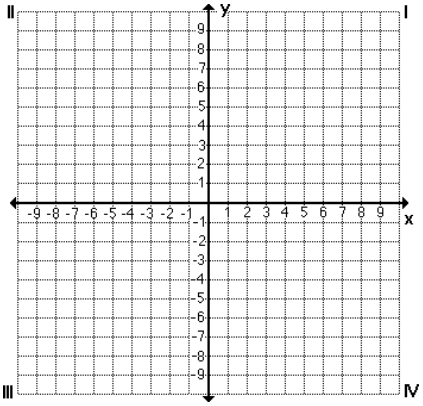
2. $j(x) = 3(x+4)^2 - 5$



3. $y = \frac{1}{2}f(x-2) + 3$



4. $r(x) = -4|x+5| + 8$



Let $f(x) = \frac{2}{3}x - 4$, $g(x) = -3|x-8| + 4$, and $h(x) = \begin{cases} -\sqrt{x+4} - 2 & if\ x \geq 5 \\ 2(x-1)^3 + 5 & if\ x < 5 \end{cases}$, find:

5. $g(-1)$

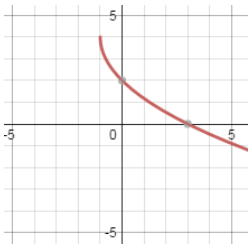
6. $h(0)$

7. $f(-6)$

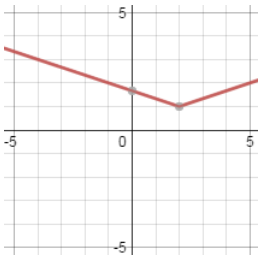
8. $h(5)$

Write the equation of each function shown

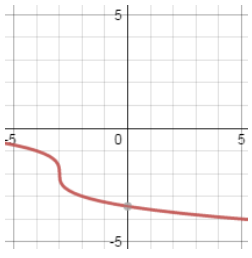
9.



10.



11.



Without graphing, find the x-intercept and y-intercept of each function

12. $f(x) = 2\sqrt{x+1} - 5$

13. $g(x) = -\frac{1}{3}(x-3)^2 + 12$

Solve each equation

14. $-37 + 7x = 8x + 2(x-8)$

15. $|5x+1| = x - 2$

16. $\frac{5}{3}x + \frac{19}{6} = \frac{9}{2}$

17. $-6|9+6x| - 1 = 53$

Find the inverse of each function

18. $f(x) = 8(x+5)^3 + 1$

19. $g(x) = \frac{1}{4}x^2 - 7,\ x \leq 0$