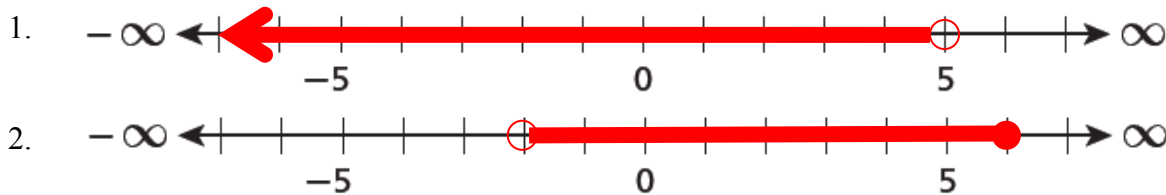


Intro to Functions Review

#1 – 2. Use interval notation to represent the set of numbers.



#3-5. To which sets of numbers does the number belong?

3. $\sqrt{66}$

4. -18

5. $-\frac{7}{5}$

#6-7. Find the opposite and the reciprocal of the number.

6. -450

7. 0.75

#8-10. Evaluate the expression for the given value of the variable(s).

8. $3a - 3b$; $a = -3$, $b = -6$

9. $\frac{3(4h + 6)}{2 + h}$; $h = 1$

10. The expression $-16t^2 + 1400$ models the height of an object t seconds after it has been dropped from a height of 1400 feet. Find the height of an object after falling for 5.2 seconds.

#11-12. Simplify by combining like terms.

11. $4c - 6d - 7c + d$

12. $2(-4y + 1) + 5y$

#13-14. Solve the equation.

13. $-9y + 17 = 2 - 3y$

14. $-2y + 6 = 4(y + 2)$

Solve the equation or formula for the indicated variable.

15. $S = 2r^4t$, for t

#16 – 18. Give the equation, basic graph and the domain and range for the following functions.

16. Quadratic function

17. Square root function

18. Absolute value function

19. Write the equation that is the translation of $y = x^2$ right 4 unit and down 1 units.

20. Write the equation that is the translation of $y = |x|$ left 1 and up 11 units.

21. Describe the transformations for $t(x) = -3g(x - 1) + 1$.

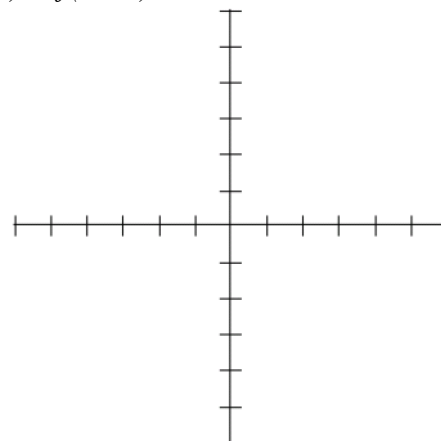
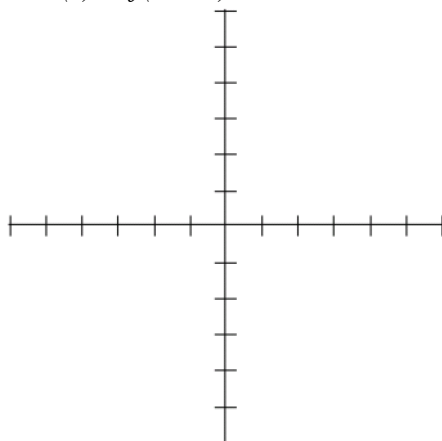
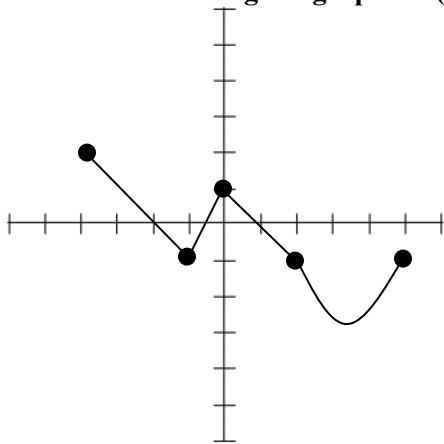
22. Describe the transformations for $t(x) = \frac{1}{2}f(x) + 7$.

23. Given $f(x) = |x - 2|$, sketch the graph. Is $f(x)$ a function?

#24 – 25. Using the graph of $f(x)$ on the left, graph the transformations.

24. $t(x) = f(x + 2) + 3$

25. $t(x) = f(x - 1) - 2$



#26 – 27. Evaluate the following expressions given the following functions: $f(x) = x^2 - 2$ and $g(x) = 2x + 3$.

26. $f(-2) - g(1)$

27. $f(4) - 3g(-2)$

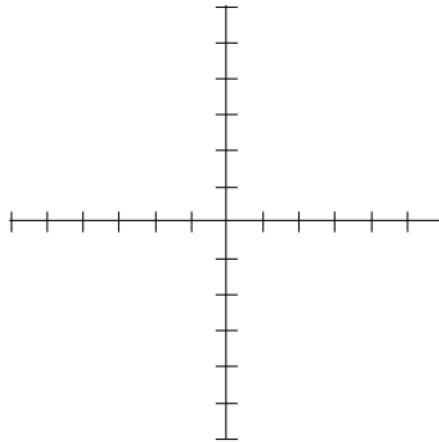
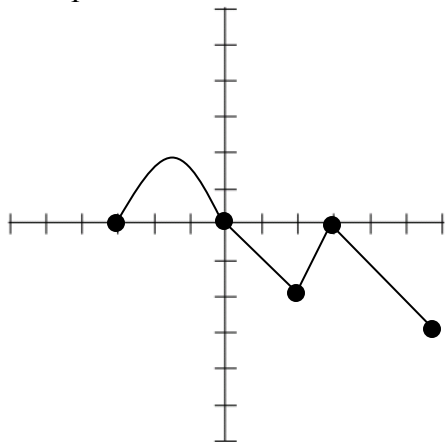
#28 – 29. Find the inverse of the function. Then use it to find $g^{-1}(3)$, $g^{-1}(0)$, and $g^{-1}(1)$.

28. $g(x) = \frac{1}{3}x - 2$

29. $g(x) = 2x + 1$

Use the graphs below to answer #30 – 32.

30. Graph the inverse of the function $f(x)$ graphed below. Is it a function?

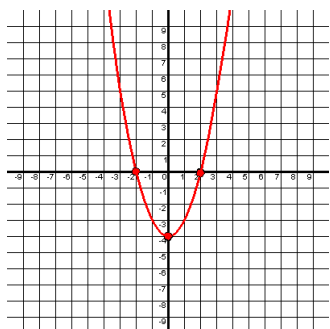


31. Using #30, evaluate $f(-3)$, $f(0)$, and $f(2)$.

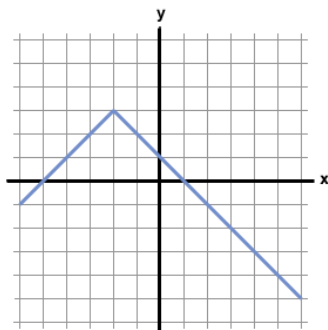
32. Using #30, evaluate $f^{-1}(-2)$ and $f^{-1}(-3)$.

#33 – 35. Which family of functions does the graph belong to? Find the domain and range, and write it in interval notation.

33.



3



35

