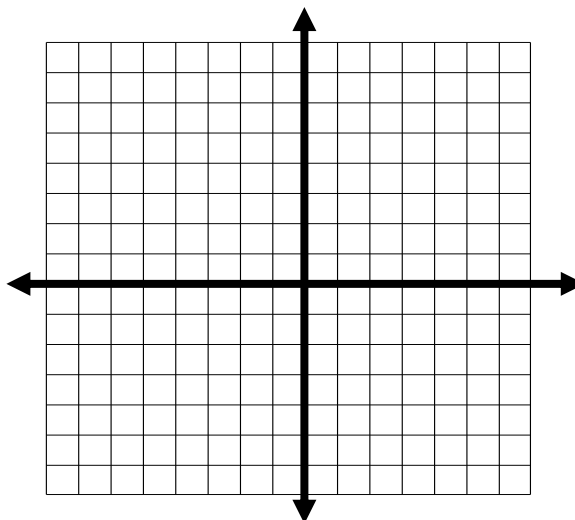


Part I. Graph each piecewise function. Then, find the domain and range for each piecewise function.

1. $f(x) = \begin{cases} 2x + 1 & x \geq 1 \\ x^2 + 3 & x < 1 \end{cases}$

Domain: _____

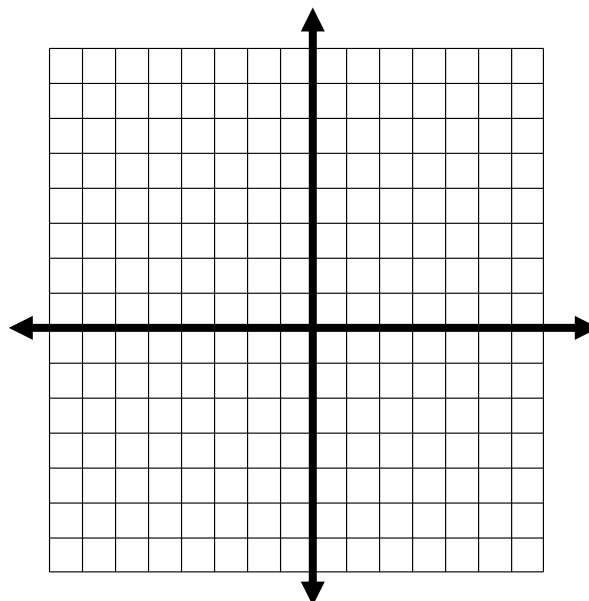
Range: _____



2. $f(x) = \begin{cases} -2x + 1 & x \leq 2 \\ 5x - 4 & x > 2 \end{cases}$

Domain: _____

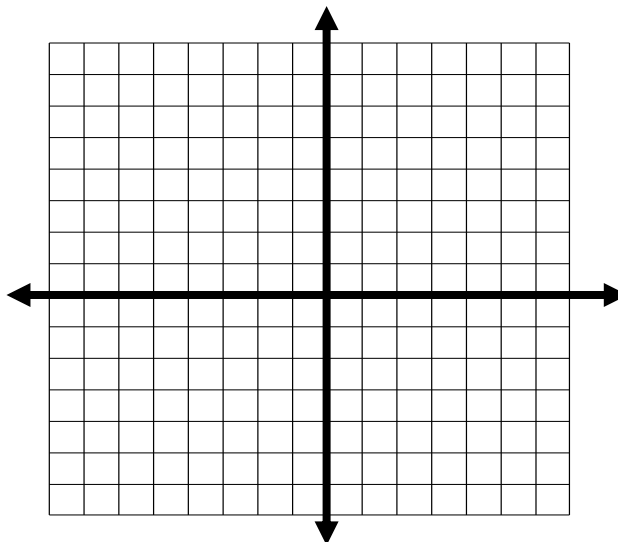
Range: _____



3. $f(x) = \begin{cases} x^2 - 1 & x \leq 0 \\ 2x - 1 & 0 < x \leq 5 \\ 3 & x > 5 \end{cases}$

Domain: _____

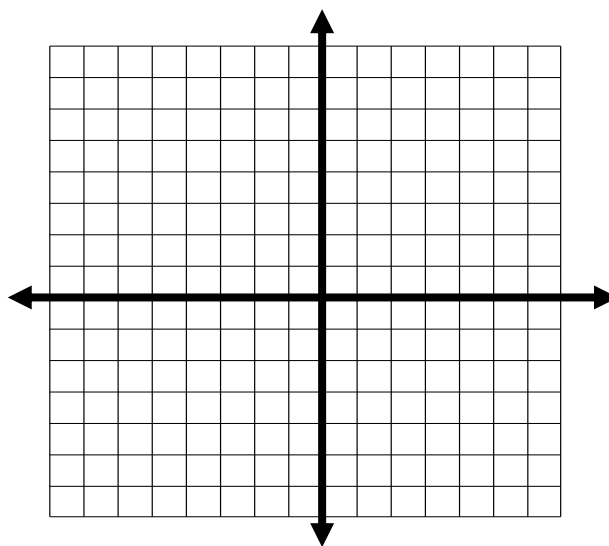
Range: _____



4. $f(x) = \begin{cases} 5 & x \leq -3 \\ -2x - 3 & x > -3 \end{cases}$

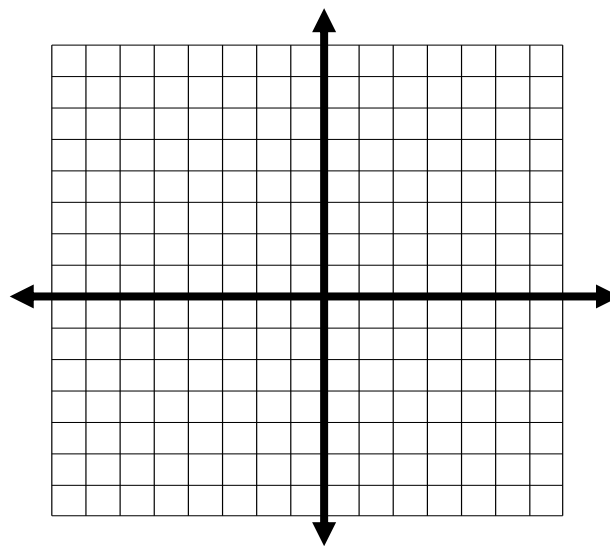
Domain: _____

Range: _____



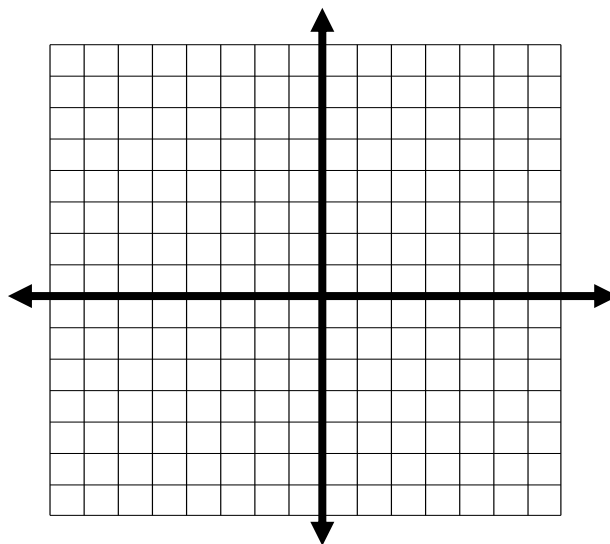
5. $f(x) = \lfloor x - 1 \rfloor$

X	Y
-2	
-1	
0	
1	
2	



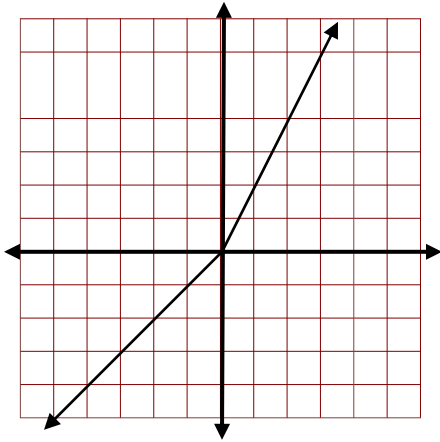
6. $f(x) = \lfloor x + 2 \rfloor$

X	Y
-2	
-1	
0	
1	
2	



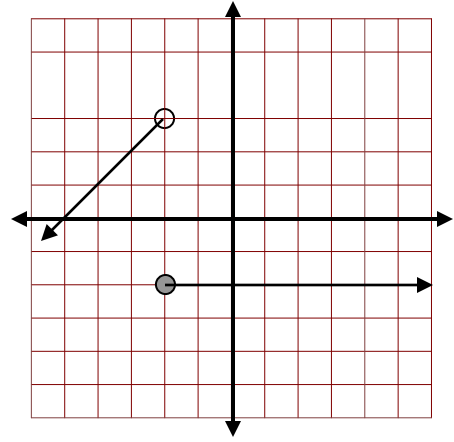
Part II. Evaluate the graph at the specified domain value.

7.



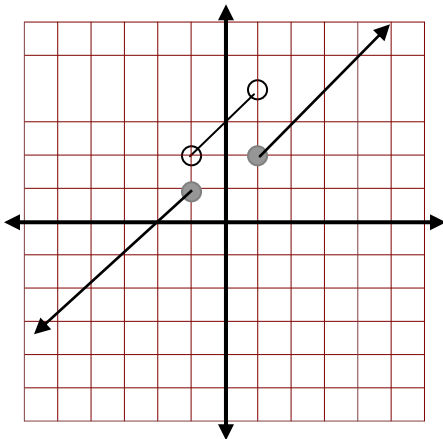
$f(2) =$
 $f(-1) =$
 $f(-3) =$

8.



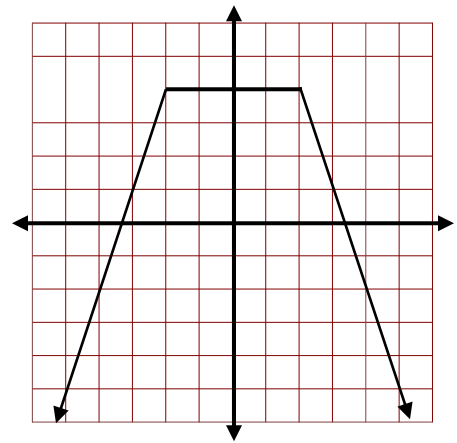
$f(-2) =$
 $f(3) =$
 $f(-4) =$

9.



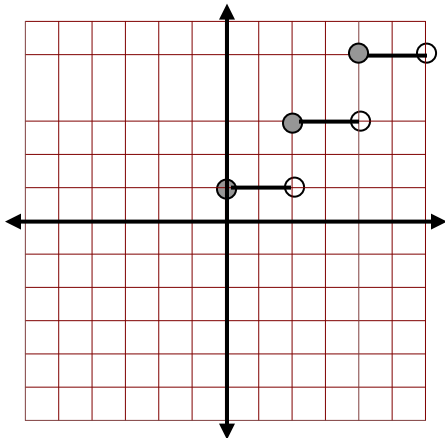
$f(2) =$
 $f(-1) =$
 $f(0) =$

10.



$f(-2) =$
 $f(3) =$
 $f(-4) =$

11.



$f(2) =$
 $f(3) =$
 $f(4) =$
 $**f(6) =$

Part III. For problems 1- 12, evaluate the function for the given values of x.

$$f(x) = \begin{cases} 3, & \text{if } x \leq 0 \\ 2, & \text{if } x > 0 \end{cases}$$

$$g(x) = \begin{cases} x+5, & x \leq 3 \\ 2x-1, & x > 3 \end{cases}$$

$$h(x) = \begin{cases} \frac{1}{2}x - 4, & x \leq -2 \\ 3 - 2x, & x > -2 \end{cases}$$

- | | | | |
|------------|-------------|-------------|---------------------|
| 1. $f(2)$ | 2. $f(-4)$ | 3. $f(0)$ | 4. $f(\frac{1}{2})$ |
| 5. $g(7)$ | 6. $g(0)$ | 7. $g(-1)$ | 8. $g(3)$ |
| 9. $h(-4)$ | 10. $h(-2)$ | 11. $h(-1)$ | 12. $h(6)$ |

Evaluate the greatest integer.

13. $\lfloor -0.7 \rfloor$ 14. $\lfloor 3.4 \rfloor$

Part IV. Match the piecewise function with its graph.

15. $f(x) = \begin{cases} x-4, & x \leq 1 \\ 3x, & x > 1 \end{cases}$

16. $f(x) = \begin{cases} x+4, & x \leq 0 \\ 2x+4, & x > 0 \end{cases}$

17. $f(x) = \begin{cases} 3x-2, & x \leq 1 \\ x+2, & x > 1 \end{cases}$

18. $f(x) = \begin{cases} 2x+3, & x \geq 0 \\ x+4, & x < 0 \end{cases}$

19. $f(x) = \begin{cases} 3x-1, & x \geq -1 \\ -5, & x < -1 \end{cases}$

20. $f(x) = \begin{cases} -3x-1, & x \leq 1 \\ -5, & x > 1 \end{cases}$

