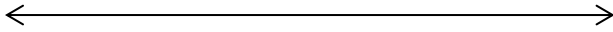


CORRECTIVE ASSIGNMENT

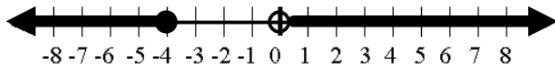
Graph the compound inequality.

1. $-2 < x \leq 1$



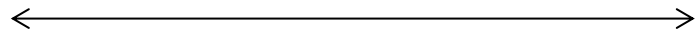
Write a compound inequality that represents...

2.



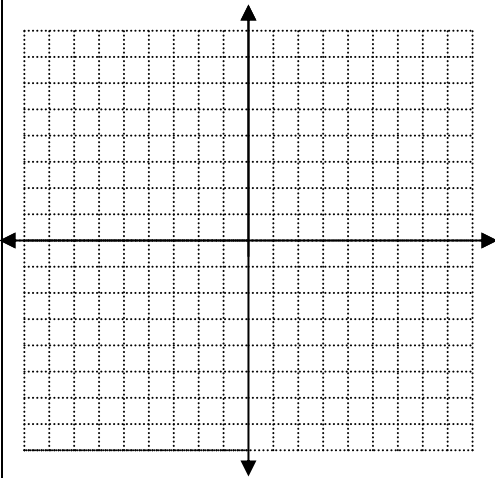
Solve the inequality and graph the solution.

3. $2|4 - 3x| \geq 12$



Graph the following.

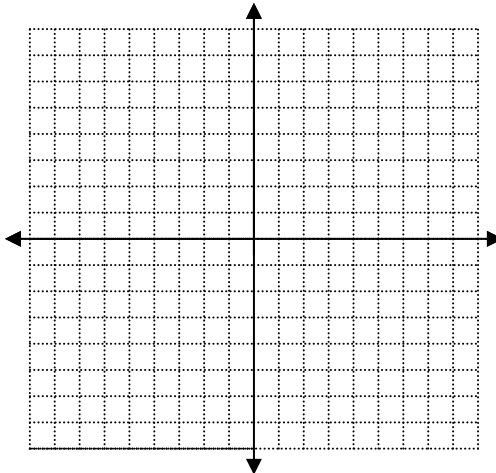
4. $f(x) < 5 - x$



Graph the following. State the range.

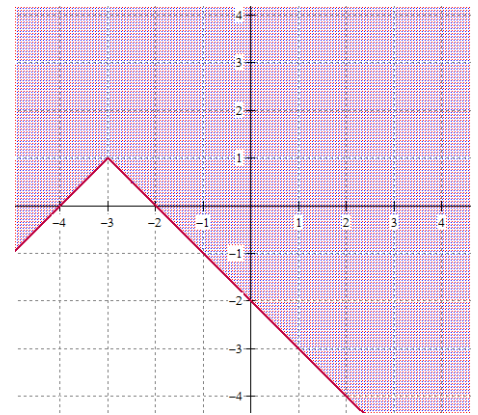
5. $y = -\frac{3}{4}|x - 3| + 5$

Range =



Write the inequality of the function. Is the point given a solution?

6. $(-3, 1)$



Use the piecewise function to evaluate the following.

7.

$$f(x) = \begin{cases} |2x - 8| + 2, & x \leq -2 \\ -2x^2 - 3x, & -2 < x \leq 0 \\ \frac{2}{x - 1}, & x > 0 \end{cases}$$

a. $f(4) =$

b. $f(-6) =$

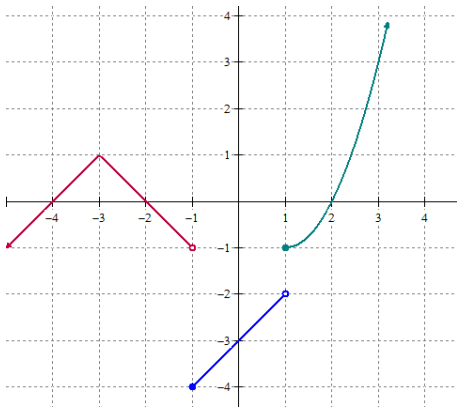
c. $f(-1) =$

d. $f(-2) =$

Use the piecewise function to evaluate the following.

Graph the following piecewise functions.

8.



a. $f(2) =$

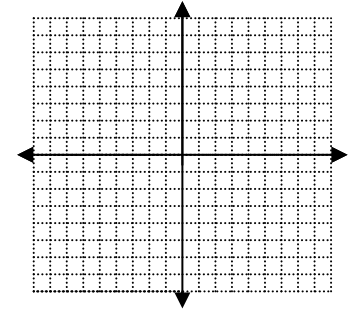
b. $f(-1) =$

c. $f(0) =$

d. $f(1) =$

9.

$$f(x) = \begin{cases} \frac{2}{3}x - 2, & x \leq 0 \\ 6 - x, & x > 0 \end{cases}$$



Application

VERBALLY

10. Admission into a secret math society requires the applicant be between the ages of 30 and 50. Which of the following inequalities can be used to determine whether an applicant's age, a , satisfies the requirements for the society?

- (A) $|a - 10| < 50$
- (B) $|a + 50| < 10$
- (C) $|a + 30| < 40$
- (D) $|a - 40| < 10$
- (E) $|a - 50| < 10$

ALGEBRAICALLY

11. Mr. Kelly enters a 24 hour Pokémon competition modeled by the function below where t is the time in hours and c is his total number of cards (in thousands).

$$c(t) = -2.25|t - 10| + 80$$

- a. Find $c(5)$. What does this mean?
- b. What is the maximum cards Kelly will have?
- c. When will Kelly have 52 thousand cards?

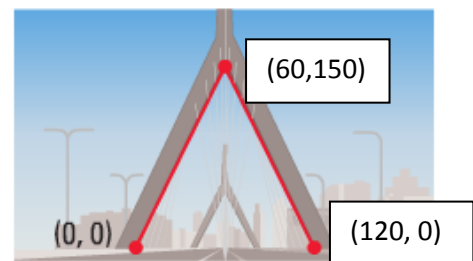
NUMERICALLY

12. Fill in the table using the function $f(x) = 2|x - 3|$.

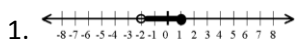
x	$f(x)$
-2	
0	
5	
-6	
	20
	8

GRAPHICALLY

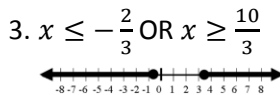
13. Check out the suspension bridge below that is suspended from two towers. Write an absolute value function that represents the inverted V-shaped portion of one tower.



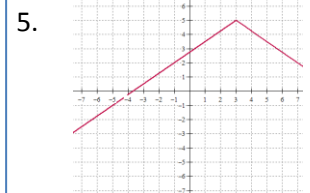
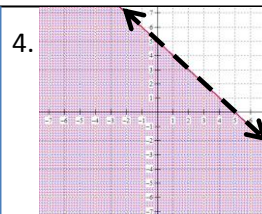
CORRECTIVE ASSIGNMENT ANSWERS



2. $x \leq -4$ OR $x > 10$



3. $x \leq -\frac{2}{3}$ OR $x \geq \frac{10}{3}$



6. yes
 $y \geq -|x + 3| + 1$

7. a. $\frac{2}{3}$ b. 22
 c. 1 d. 14

8. a. 0 b. -4
 c. -3 d. -1



10. D

11. a. After 5 hours Kelly has 68.75 thousand cards (68,750 cards)
 b. 80 thousand cards
 c. $22.\bar{4}$ hours

12.

x	$f(x)$
-2	10
0	6
5	4
-6	18
-7	20
-1	8

13. $y = -\frac{5}{2}|x - 60| + 150$