

DIRECTIONS: Use the following information to write an equation for a line in standard form.

- Goes through $(-2, 1)$ and $(2, 4)$ $3x - 4y = -10$
- Goes through $(3, 5)$ and $(3, 1)$ $x = 3$
- Goes through $(-3, 2)$ and is perpendicular to the line $y = -4x + 3$.
 $x - 4y = -11$

DIRECTIONS: Answer the following questions.

- Is the ordered pair $(-2, 1)$ a solution of the inequality $+2y > 4$? **No**
- Is the ordered pair $(-3, 6)$ a solution of the inequality $+2y > 4$? **Yes**

DIRECTIONS: Graph the inequalities in a coordinate plane (use graph paper). (See page 3)

- $2y > 6$
- $y < 2x - 1$
- $4x + y \leq -2$
- $-5x + 5y > 10$
- $2x - 4y > 8$
- $12x + 4y < 8$

DIRECTIONS: Evaluate the following function for the given values of x .

$$f(x) = \begin{cases} 3x - 7, & \text{if } x \leq 2 \\ 6 - 2x, & \text{if } x > 2 \end{cases}$$

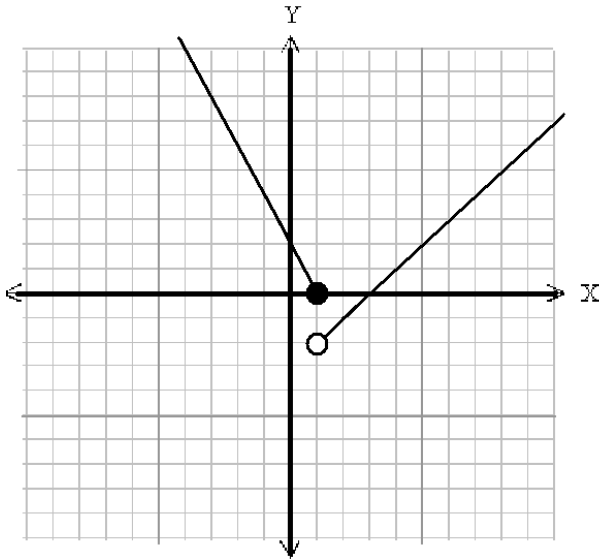
- $f(2) = -1$
- $f(-3) = -16$
- $f(5) = -4$

DIRECTIONS: Graph the functions in a coordinate plane (use graph paper). (See page 4)

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

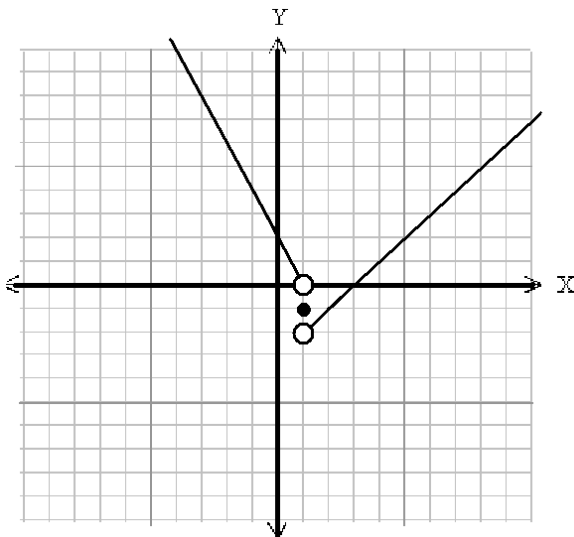
DIRECTIONS: Write equations for the piecewise functions shown in the graphs.

19.



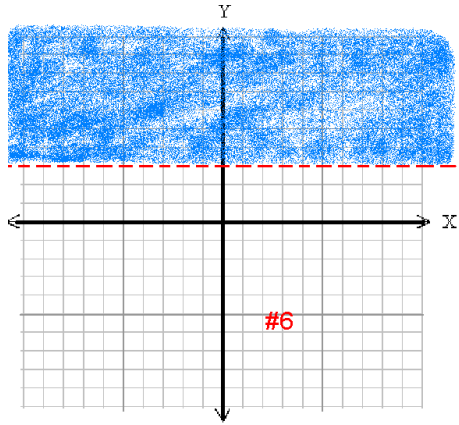
$$f(x) = \begin{cases} -2x + 2 & \text{if } x \leq 1 \\ x - 3 & \text{if } x > 1 \end{cases}$$

20.

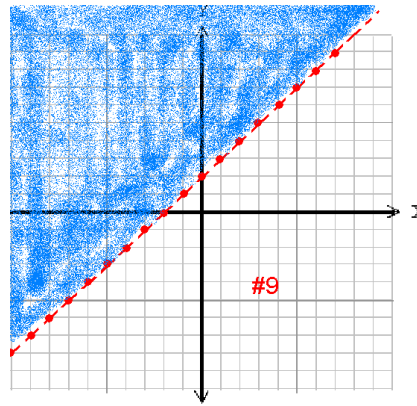


$$f(x) = \begin{cases} -2x + 2 & \text{if } x < 1 \\ -1 & \text{if } x = 1 \\ x - 3 & \text{if } x > 1 \end{cases}$$

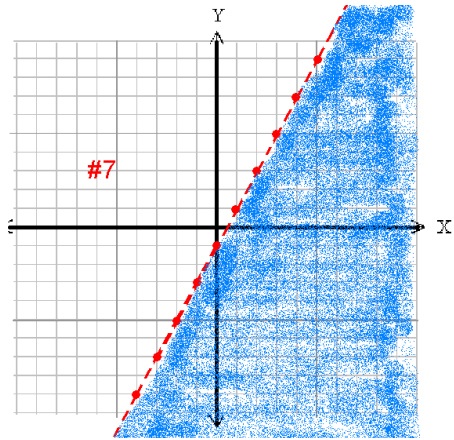
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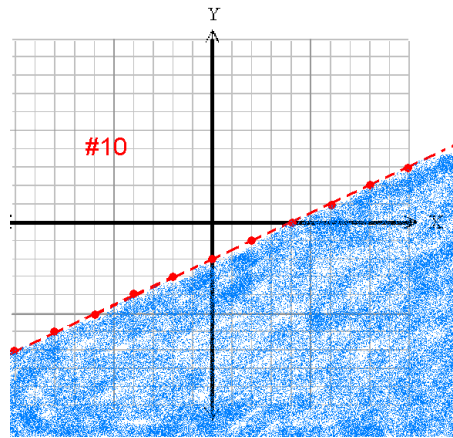
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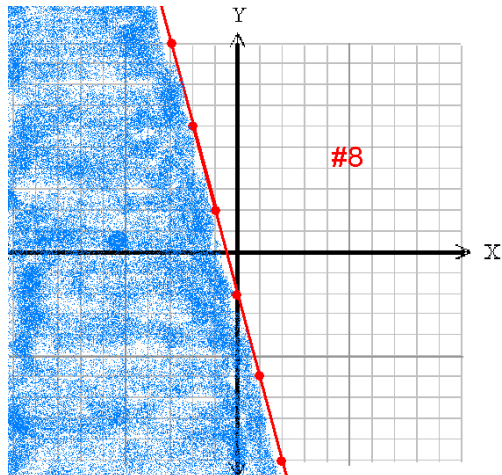
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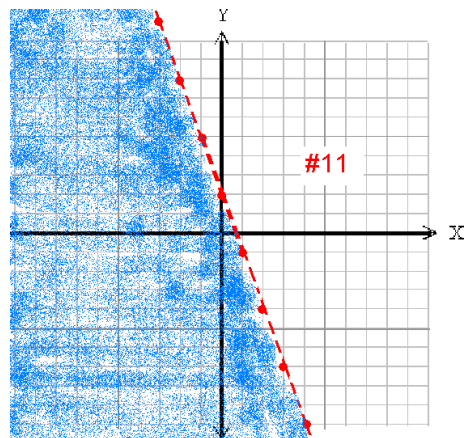
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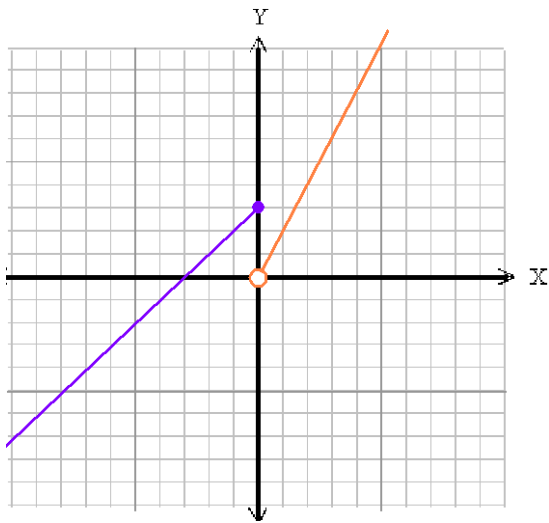
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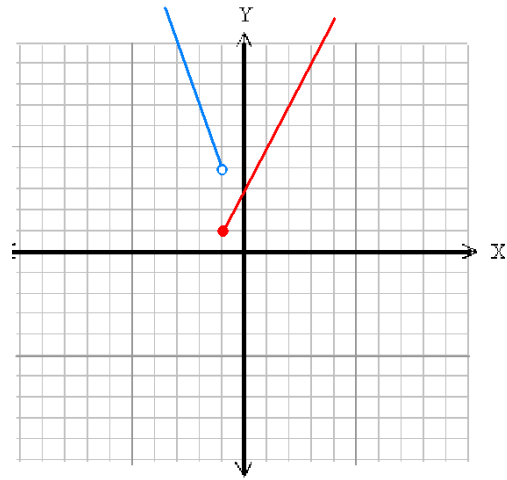
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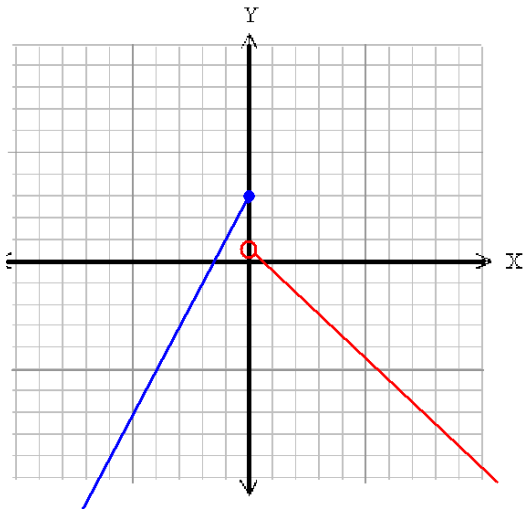
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16.



17.



18.

