

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

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

DIRECTIONS: Answer the following questions.

4. Is the ordered pair $(-2, 1)$ a solution of the inequality $x + 2y > 4$?
5. Is the ordered pair $(-3, 6)$ a solution of the inequality $x + 2y > 4$?

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

6. $2y > 6$
7. $y < 2x - 1$
8. $4x + y \leq -2$
9. $-5x + 5y > 10$
10. $2x - 4y > 8$
11. $12x + 4y < 8$

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

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

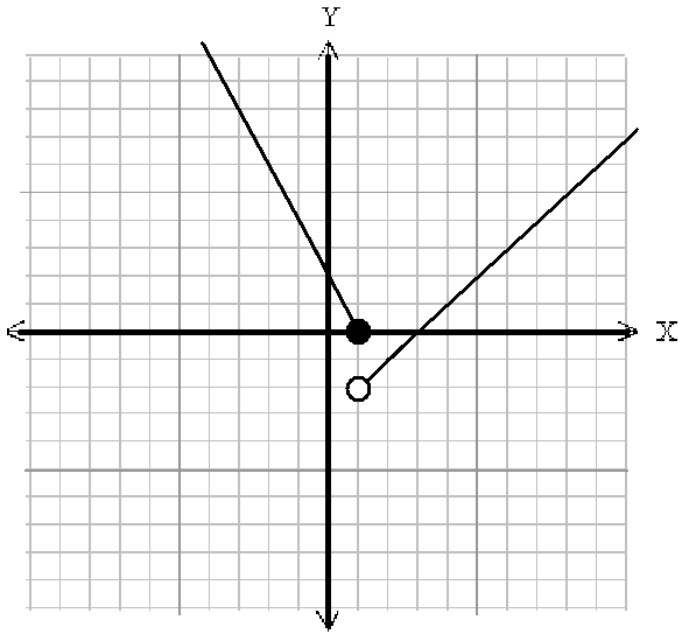
12. $f(2)$
13. $f(-3)$
14. $f(5)$

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

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

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

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