

Unit 1 Day 11 Review: Piecewise Functions

Name: _____

Evaluate the function for the given value of x.

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

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

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

- | | | | |
|----------------------------|------------------------------------|-------------------------------------|--|
| 1. $f(2) =$ _____ | 2. $f(-4) =$ _____ | 3. $f(x) =$ _____ | 4. $f\left(\frac{1}{2}\right) =$ _____ |
| 5. $g(7) =$ _____ | 6. $g(0) =$ _____ | 7. $g(-1) =$ _____ | 8. $g(3) =$ _____ |
| 9. $h(-4) =$ _____ | 10. $h(-2) =$ _____ | 11. $h(-1) =$ _____ | 12. $h(6) =$ _____ |
| 13. $2f(2) - f(0) =$ _____ | 14. $g(0) + h(-1) + 2h(6) =$ _____ | 15. $3h(-2) - 3g(3) + g(7) =$ _____ | |

Match the piecewise function with its graph.

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

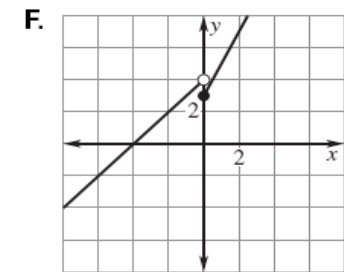
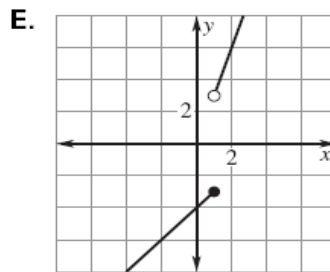
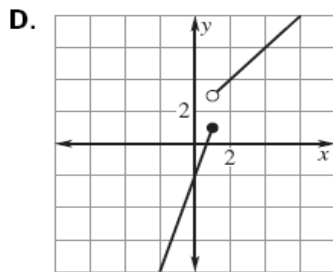
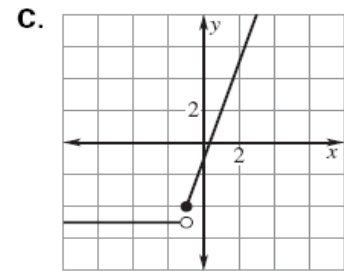
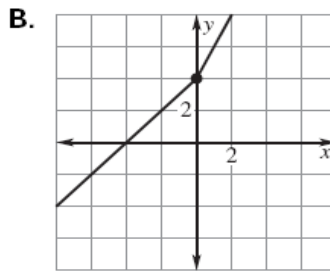
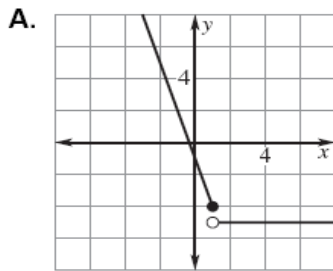
17. $f(x) = \begin{cases} x + 4, & \text{if } x \leq 0 \\ 2x + 4, & \text{if } x > 0 \end{cases}$

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

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

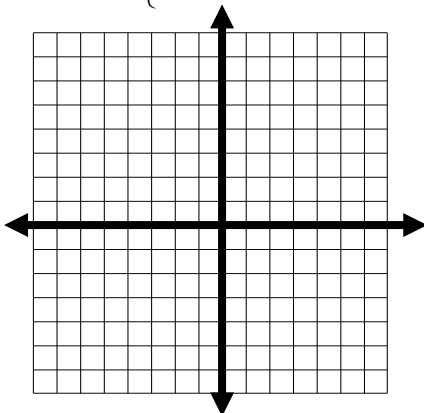
20. $f(x) = \begin{cases} 3x - 1, & \text{if } x \geq -1 \\ -5, & \text{if } x < -1 \end{cases}$

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



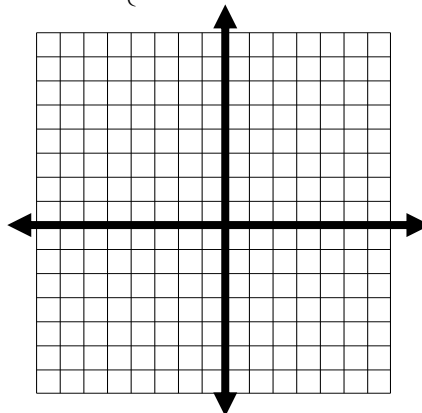
Graph the function.

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



20.

$$f(x) = \begin{cases} x + 1 & \text{if } x < 3 \\ 2x - 4 & \text{if } x > 3 \end{cases}$$



21.

$$f(x) = \begin{cases} 3x - 4 & \text{if } -6 \leq x < 3 \\ 10 - x^2 & \text{if } 3 \leq x < 6 \end{cases}$$

