

Name \_\_\_\_\_

Date \_\_\_\_\_ Block \_\_\_\_\_

# Piecewise Functions - NOTES

Evaluate the function for the given value of x.

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

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

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

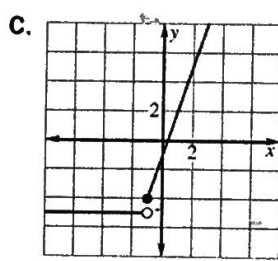
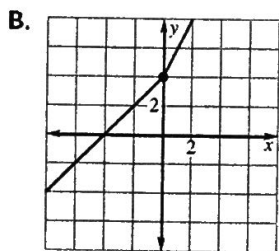
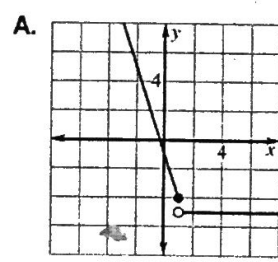
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|------------|-------------|-------------|--------------------------------|
| 1. $f(2)$  | 2. $f(-4)$  | 3. $f(0)$   | 4. $f\left(\frac{1}{2}\right)$ |
| 5. $g(7)$  | 6. $g(0)$   | 7. $g(-1)$  | 8. $g(3)$                      |
| 9. $h(-4)$ | 10. $h(-2)$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

Match the piecewise function with its graph.

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

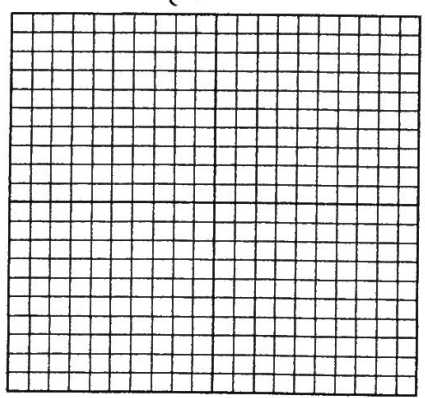
14  $f(x) = \begin{cases} 3x - 1, & \text{if } x \geq -1 \\ -5, & \text{if } x < -1 \end{cases}$

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

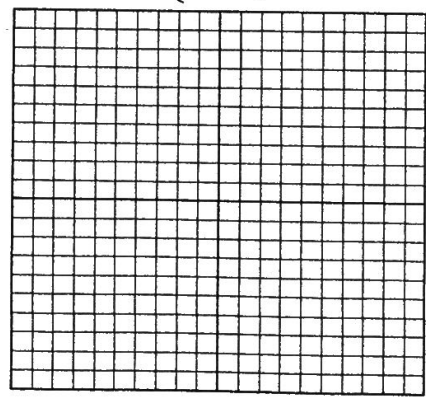


Graph the following piecewise functions.

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



17.  $g(x) = \begin{cases} -x + 2, & x < 2 \\ x - 2, & x \geq 2 \end{cases}$



Write the equations for each piecewise function

