

Name: _____

Ch 2.7 Piece functions
Worksheet #1

EVALUATING FUNCTIONS Evaluate the function for the given value of x .

$$f(x) = \begin{cases} 5x - 1, & \text{if } x < -2 \\ x - 9, & \text{if } x \geq -2 \end{cases}$$

1. $f(-4)$

2. $f(-2)$

3. $f(0)$

4. $f(5)$

$$h(x) = \begin{cases} \frac{1}{2}x - 10, & \text{if } x \leq 6 \\ -x - 1, & \text{if } x > 6 \end{cases}$$

5. $h(1)$

6. $h(-10)$

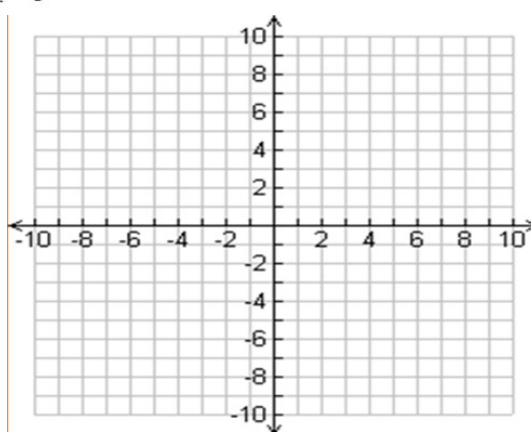
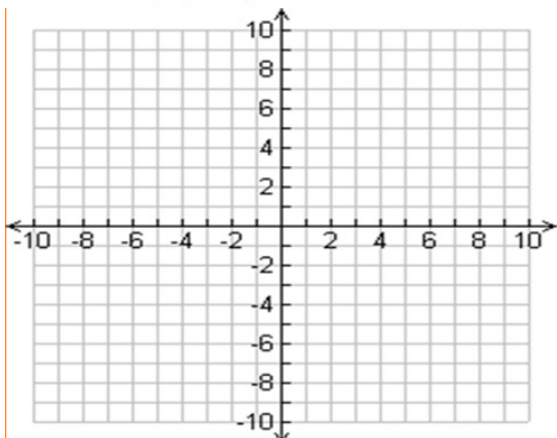
7. $h(6)$

8. $h(0)$

GRAPHING FUNCTIONS Graph the function.

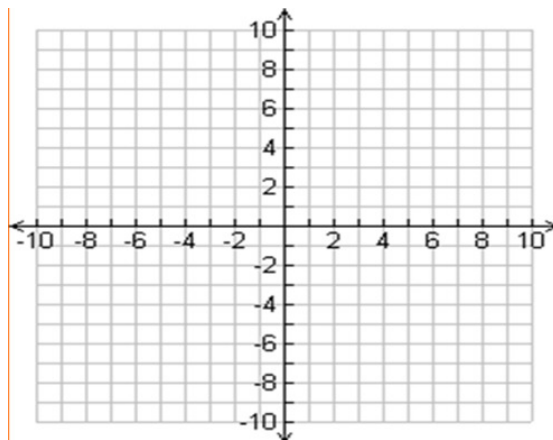
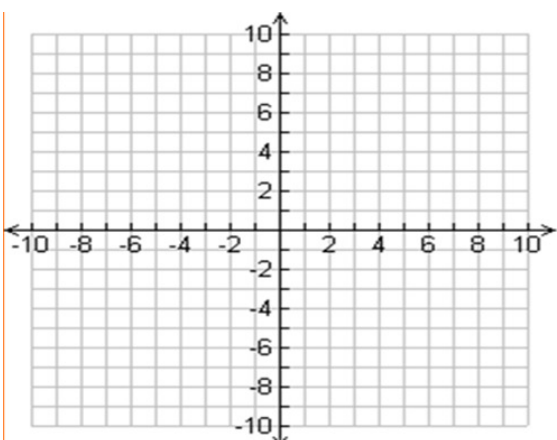
9. $f(x) = \begin{cases} 2x, & \text{if } x \geq 1 \\ -x + 3, & \text{if } x < 1 \end{cases}$

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



11. $f(x) = \begin{cases} x - 8, & \text{if } x < 9 \\ \frac{1}{3}x - 2, & \text{if } x \geq 9 \end{cases}$

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

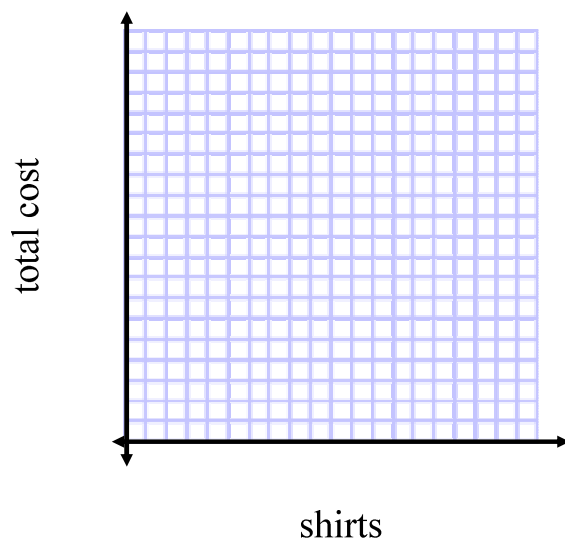



13.  **SILK-SCREEN T-SHIRTS** In Exercises 54 and 55, use the following silk-screen shop charges.

- An initial charge of \$20 to create the silk screen
- \$17.00 per shirt for orders of 50 or fewer shirts
- \$15.80 per shirt for orders of more than 50 shirts

Write a piecewise function that gives the cost C for an order of x shirts.

Graph the function.



-  **PARKING RATES** The weekday parking rates for a garage are shown. Write and graph a piecewise function for the weekday parking charges at that garage.

