

In Exercises 1–6, evaluate the function.

$$f(x) = \begin{cases} -x + 2, & \text{if } x < -3 \\ 7, & \text{if } -3 \leq x < 0 \\ 3x - 1, & \text{if } x \geq 0 \end{cases}$$

1. $f(-5)$

2. $f(4)$

3. $f(1)$

4. $f(0)$

5. $f\left(-\frac{1}{2}\right)$

6. $f(-3)$

In Exercises 7–10, graph the function. Describe the domain, range, and end behavior of the function. (Use Additional Graph paper to graph)

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

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

9. $f(x) = \begin{cases} -x + 1, & \text{if } x < -3 \\ 4, & \text{if } -3 \leq x < 0 \\ 3x + 4, & \text{if } x \geq 0 \end{cases}$

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

11. The total cost (in dollars) of ordering graduation announcements is represented by the piecewise function

$$c(x) = \begin{cases} 1.5x + 15, & \text{if } 0 \leq x < 25 \\ 1.25x + 15, & \text{if } 25 \leq x < 40 \\ x + 15, & \text{if } x \geq 40 \end{cases}$$

- Determine the cost of ordering 25 announcements. Then determine the cost of ordering 24 announcements.
- For what number of announcements less than 25 is it financially better to purchase 25 announcements?
- For what number of announcements less than 40 is it financially better to purchase 40 announcements?