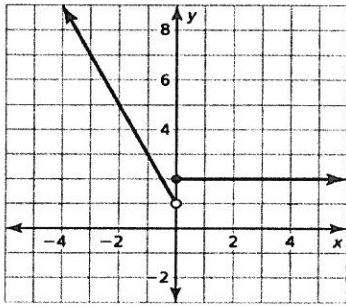


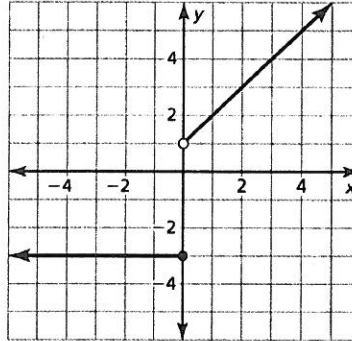
Chapter 4 Test A

Write an equation for the piecewise function

1.

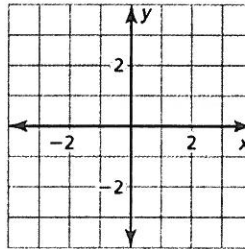


2.



3. Graph the function.

$$h(x) = \begin{cases} -2x - 2, & \text{if } x > 0 \\ 1, & \text{if } x \leq 0 \end{cases}$$



Write the slope-intercept form of the equation with the given characteristics.

4. slope = $\frac{1}{4}$; y-intercept = 2
5. slope = $-\frac{3}{2}$; passes through $(-4, 7)$
6. passes through $(-2, 1)$ and $(2, -5)$
7. parallel to the line $y = -3x + 5$; passes through $(-4, 5)$
8. perpendicular to the line $y = \frac{1}{2}x - 8$; passes through $(7, -6)$

Write the point-slope form of the equation with the given characteristics.

9. slope = 2; y-intercept = 3
10. slope = -2; passes through $(-3, 5)$
11. parallel to the line $y = \frac{3}{5}x - 8$; passes through $(0, -3)$
12. perpendicular to the line $y = -2x - 7$; passes through $(-3, 10)$

Answers

1. $f(x) = \begin{cases} -2x+1 & \text{if } x < 0 \\ 2 & \text{if } x \geq 0 \end{cases}$
2. $f(x) = \begin{cases} -2 & \text{if } x \leq 0 \\ 1+x & \text{if } x > 0 \end{cases}$
3. See left.
4. $y = \frac{1}{4}x + 2$
5. $y = -\frac{3}{2}x + 1$
6. $y = -\frac{3}{2}x - 2$
7. $y = -3x - 7$
8. $y = -2x + 8$
9. $y - 3 = 2(x - 0)$
10. $y - 5 = -2(x + 3)$
11. $y + 3 = \frac{3}{5}(x - 0)$
12. $y - 10 = \frac{1}{2}(x + 3)$