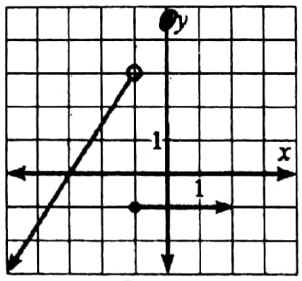
Key

Writing Piecewise Functions from Graphs

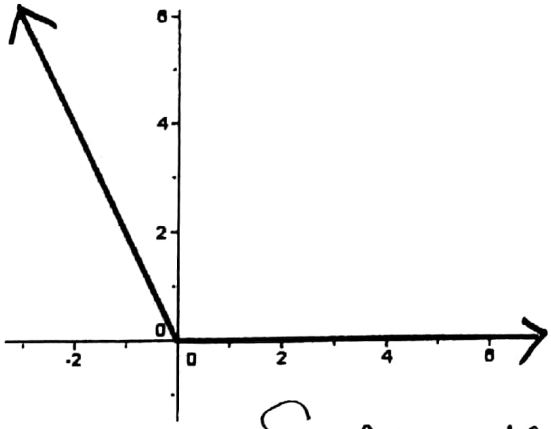
Directions: Write a piecewise function for each graph.

1.



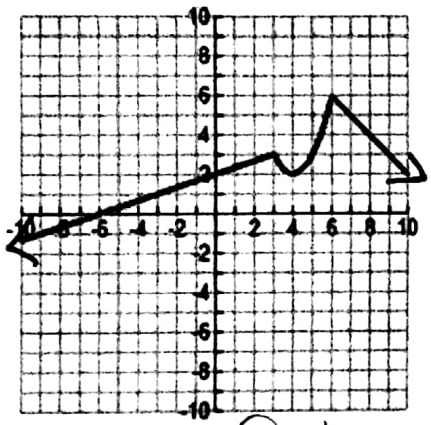
$$y = \begin{cases} \frac{3}{2}x + \frac{9}{2}, & x < -1 \\ -1, & x \geq -1 \end{cases}$$

4.



$$y = \begin{cases} -2x, & x \leq 0 \\ 0, & x > 0 \end{cases}$$

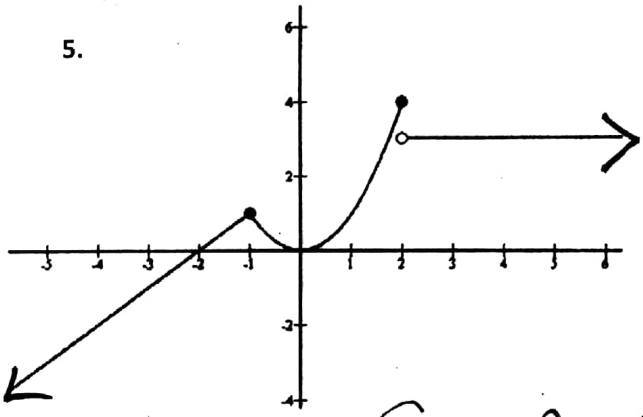
2.



$$y = \begin{cases} \frac{1}{3}x + 2, & x \leq 3 \\ (x-4)^2 + 2, & 3 < x \leq 6 \\ -x + 12, & x > 6 \end{cases}$$

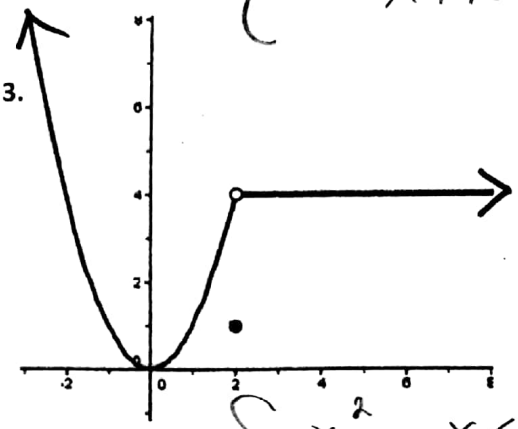
or $x^2 - 8x + 18$

5.



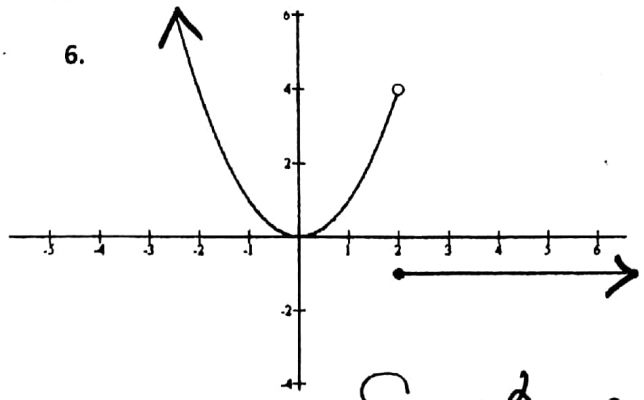
$$y = \begin{cases} x + 2, & x \leq -1 \\ x^2, & -1 < x \leq 2 \\ 3, & x > 2 \end{cases}$$

3.



$$y = \begin{cases} x^2, & x < 2 \\ 1, & x = 2 \\ 4, & x > 2 \end{cases}$$

6.



$$y = \begin{cases} x^2, & x < 2 \\ -1, & x \geq 2 \end{cases}$$