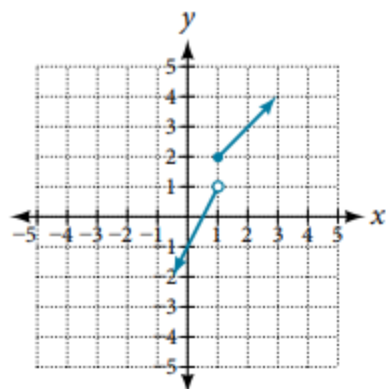
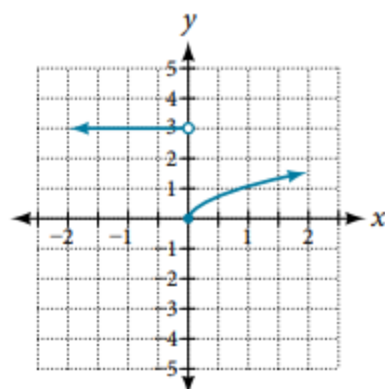


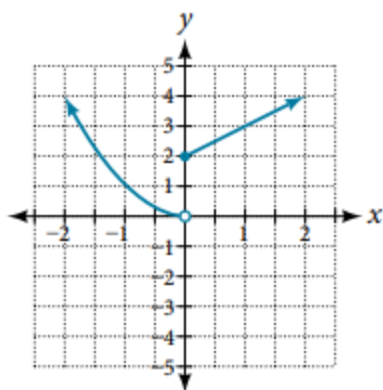
39. Domain:  $(-\infty, \infty)$



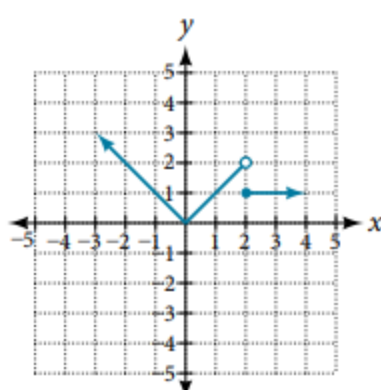
41. Domain:  $(-\infty, \infty)$



43. Domain:  $(-\infty, \infty)$



45. Domain:  $(-\infty, \infty)$



47.  $f(-3) = 1$ ;  $f(-2) = 0$ ;  $f(-1) = 0$ ;  $f(0) = 0$

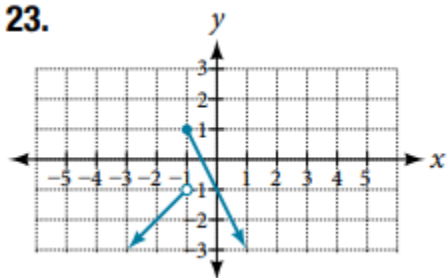
49.  $f(-1) = -4$ ;  $f(0) = 6$ ;  $f(2) = 20$ ;  $f(4) = 34$

51.  $f(-1) = -5$ ;  $f(0) = 3$ ;  $f(2) = 3$ ;  $f(4) = 16$

53.  $(-\infty, 1) \cup (1, \infty)$

15. 2    17. -1.8 or 1.8    21.  $(-\infty, -2) \cup (-2, 6) \cup (6, \infty)$

23.



27. Increasing on  $(2, \infty)$ ,  
decreasing on  $(-\infty, 2)$

29. Increasing on  $(-3, 1)$ , constant on  $(-\infty, -3)$  and  $(1, \infty)$

21.  $(-\infty, -1.1)$  and  $(1.1, \infty)$

23.  $(1.1, -0.9)$     25.  $f(2) = 2$

27.  $f(x) = \begin{cases} |x| & \text{if } x \leq 2 \\ 3 & \text{if } x > 2 \end{cases}$