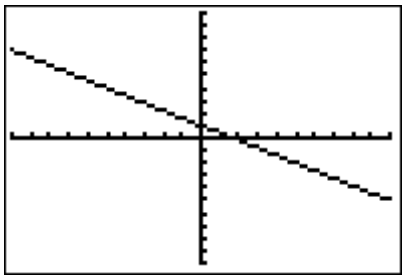
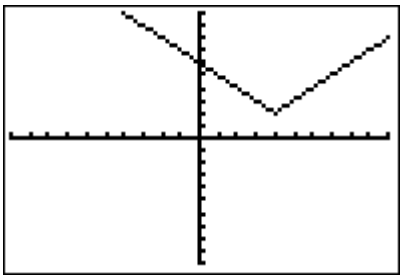
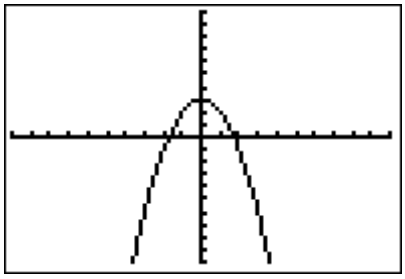
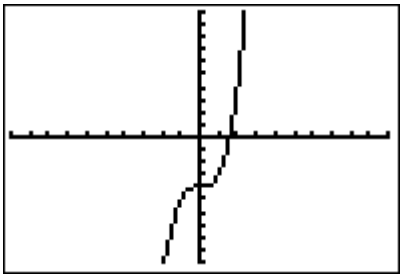
Homework: Functions and Their Graphs - Key

In Problems 1-4, find the domain of each function.

1. $(-\infty, \infty)$	2. $x \neq \frac{2}{7}$
3. $x \neq \frac{-2}{3}$	4. $(-\infty, \infty)$

In Problems 5-8, graph each function.

5. 	6. 
7. 	8. 

In Problems 9-13, for each graph of a function, find (a) the domain and range, (b) the intercepts, if any, and (c) the zeros, if any.

9.

(a) $Domain: (-\infty, \infty), Range: (-\infty, \infty)$
(b) x-intercept: (2, 0), y-intercept (0, 1)
(c) zeros: x = 2

10.

(a) $Domain: (-\infty, \infty), Range: [-4, \infty)$
(b) x-intercept: (2, 0) and (-2, 0), y-intercept (0, -4)
(c) zeros: x = -2, 2

11.

(a) $Domain: (-\infty, \infty), Range: (-\infty, \infty)$
(b) x-intercept: (-3, 0), (1, 0), (3, 0), y-intercept (0,- 1)
(c) zeros: x = -3, 1, 3

12.

(a) $Domain: (-\infty, \infty), Range: (-\infty, \infty)$
(b) x-intercept: (-4, 0), (-2, 0), (2, 0), y-intercept (0, 3)
(c) zeros: x = -4, -2, 2

13.

(a) $Domain: (-\infty, \infty), Range: [2, \infty)$
(b) x-intercept: None, y-intercept (0, 2)
(c) zeros: None