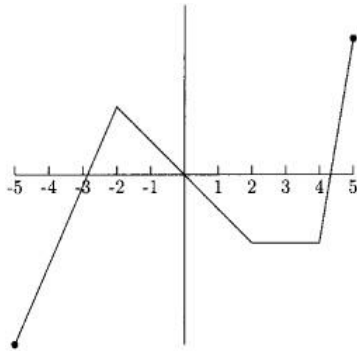
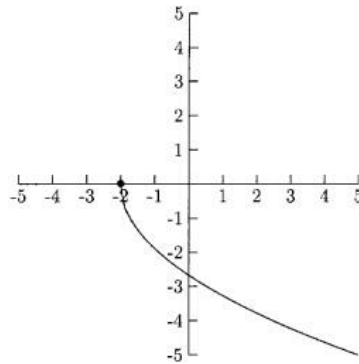


State the domain and range, where the graph is increasing, decreasing and constant in interval notation.

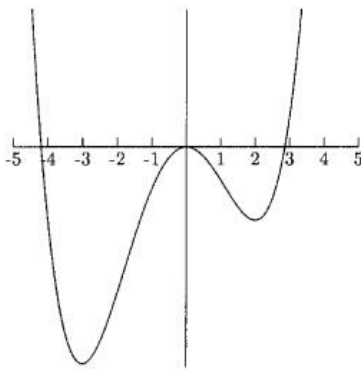
1.



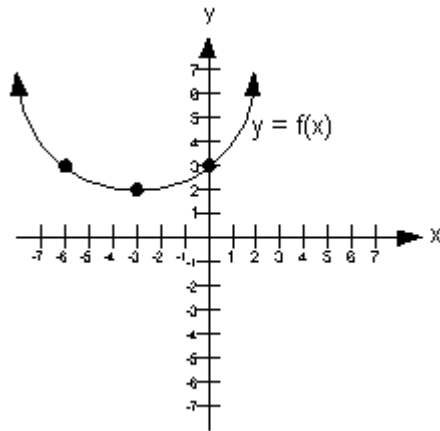
2.



3.



4.



Find the domain of each of the following functions.

5. $f(x) = x^2 - 3$

6. $f(x) = \frac{1}{x^2 - 6x + 9}$

7. $f(x) = \frac{3x}{x^2 - 8x + 15}$

8. $g(x) = \sqrt{3x - 7}$

9. $f(x) = |x + 4|$

10. $f(x) = \frac{\sqrt{x+1}}{x-7}$

Evaluate the following functions:

11. If $f(x) = x^3 + 2$, find:

a) $f(-2)$

b) $f(3)$

c) $f(0)$

d) $f(a)$

12. Find $\frac{f(a-h) - f(a)}{h}$, $h \neq 0$ for $f(x) = -2x^2 + 1$