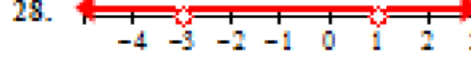# Chapter 12.3 Homework

Write each of the following inequalities in interval notation.

23.

24.

25.

26.

27.

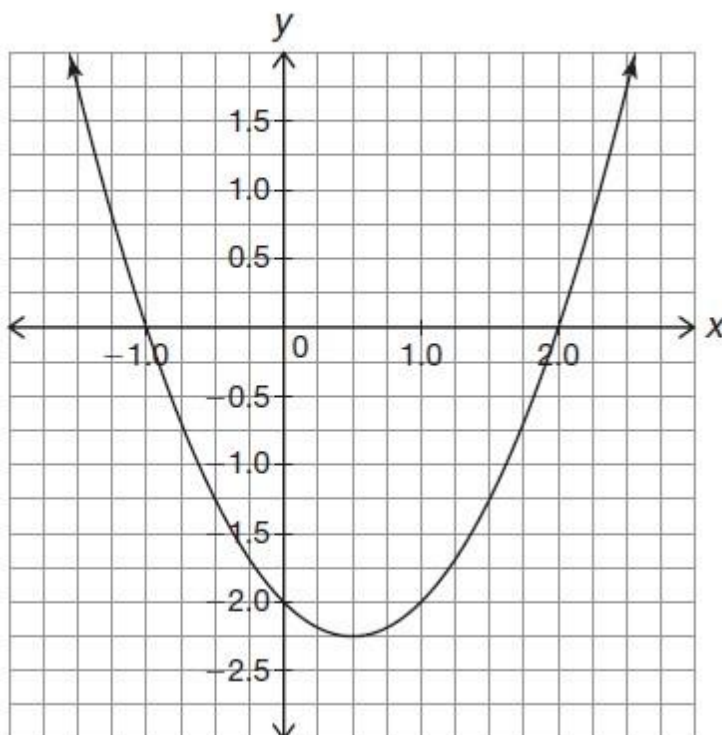28.
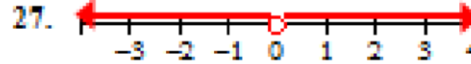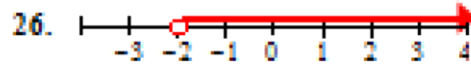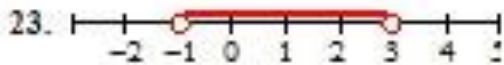
For each of the following inequalities:
  (a) Solve the inequality.
  (c) Write the solution in interval notation.

35. $2x < 10$

36. $3x \geq 24$

3. The graph shown represents the function $f(x) = x^2 - x - 2$.

Domain:

Range:

y-intercept:

Zeros:

Interval of decrease:

Interval of increase:

Write each quadratic function in standard form.

1. $f(x) = x(x + 3)$

$f(x) = x(x + 3)$
$f(x) = x \cdot x + x \cdot 3$
$f(x) = x^2 + 3x$

2. $f(x) = 3x(x - 8) + 5$

3. $g(s) = (s + 4)s - 2$

4. $d(t) = (20 + 3t)t$

Identify the intervals of increase and decrease for each function.

13. $f(x) = x^2 + 6x$

14. $f(x) = 3x^2 - 6x$