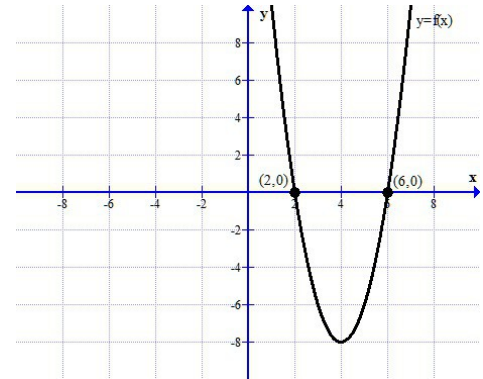


## 4.5 Practice Problems

1. Use the figure to solve the inequality.

a.  $f(x) \geq 0$

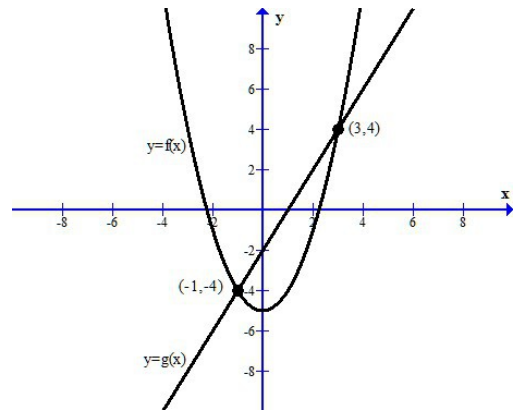
b.  $f(x) < 0$



2. Use the figure to solve the inequality.

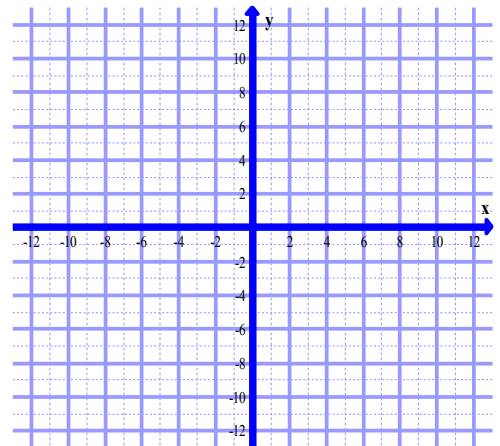
a.  $f(x) \geq g(x)$

b.  $f(x) < g(x)$



3. Solve the inequalities by graphing.

$$x^2 \geq 25$$



4. Solve the inequality.

$$(x-5)(x+2) < 0$$

5. Solve the inequality

$$x^2 \geq x + 12$$

6. Solve the inequality.

$$2x^2 + 9x + 4 < 0$$

7. A person standing close to the edge on the top of a 96 foot building throws a baseball vertically upward. The quadratic function

$$s(t) = -16t^2 + 16t + 96$$

models the ball's height above the ground,  $s(t)$ , in feet,  $t$  seconds after it was thrown.

a. For what time is the ball more than 48 feet above the ground.

b. For what time is the ball more than 80 feet above the ground.