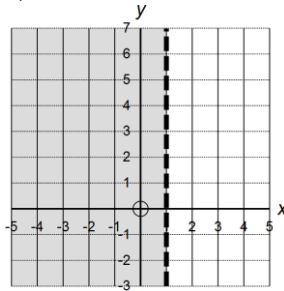


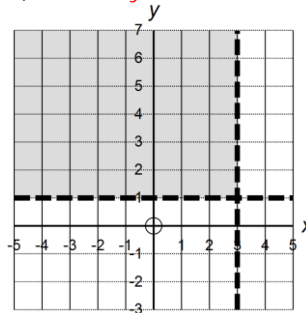
inequalities on a graph

6 Describe the unshaded regions in these graphs using inequalities

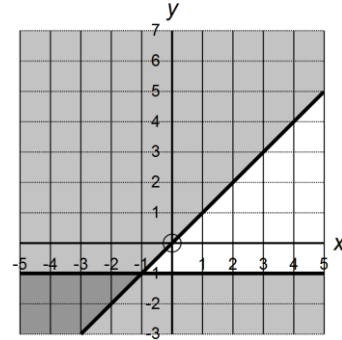
a) $x > 1$



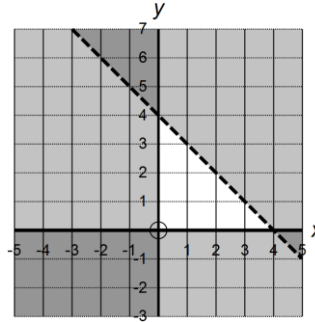
b) $x > 3, y < 1$



c) -1



d)



Identify the inequalities represented by a region on a graph

7 Solve

a) $x^2 < 9$

$$-3 < x < 3$$

c) x^2

-

b) $x^2 > 25$

$$x < -5 \quad x > 5$$

d) x^2

-

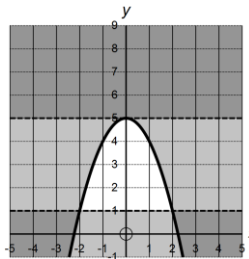
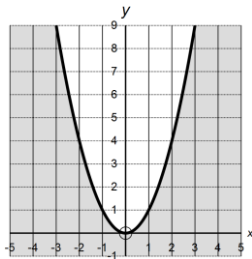
Solve quadratic inequalities (1)

8 Show each of these inequalities graphically, leaving the required region unshaded

2

b) $y \leq 5 - x^2$ and $1 < y < 5$

Represent quadratic and linear



inequalities
on a graph

9 Solve

a) $x^2 + 3x > 0$

$x < -3$ $x > 0$

d) $x^2 + x < 12$

$-4 < x < 3$

b) $x^2 - 5x \geq 0$

$x \leq 0$ $x \geq 5$

e) $x^2 - 10 < 3x$

$-2 < x < 5$

c) $x^2 + 7x + 12 < 0$

$-4 < x < -3$

ci) $6x^2 - x - 2 > 0$ $x <$

$-1/2$ $x > 2/3$

★★★
Solve
quadratic
inequalities
(2)

10 Explain why the inequality $x^2 + 4x + 4 < 0$ does not have a solution set

$x^2 + 4x + 4 = (x + 2)^2$

$(x + 2)^2 > 0$ for all value of x so no solutions for $x^2 + 4x + 4 < 0$

★★★★