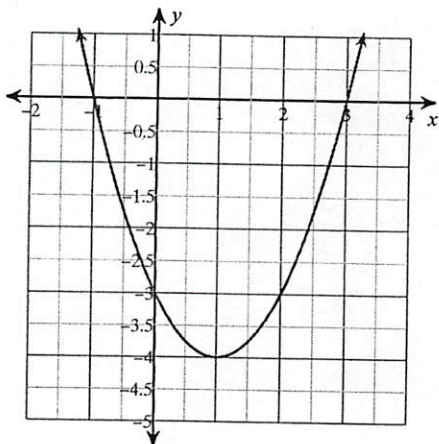


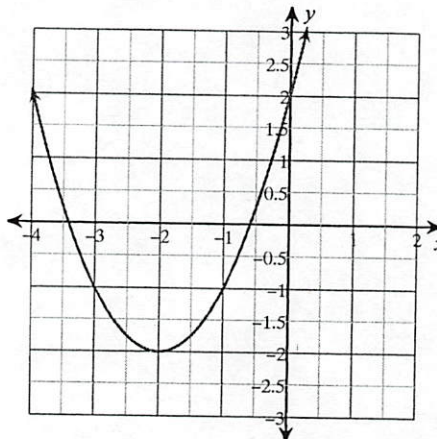
Section 3.1 Graphing

Sketch the graph of each function.

1) $f(x) = x^2 - 2x - 3$

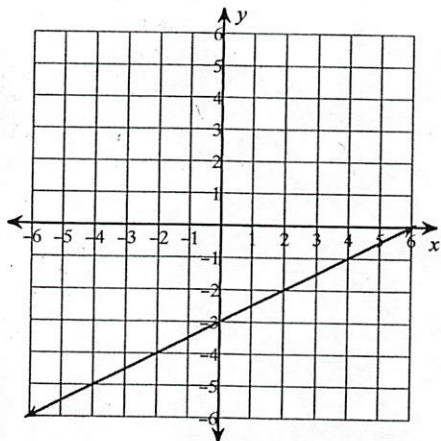


2) $f(x) = (x + 2)^2 - 2$

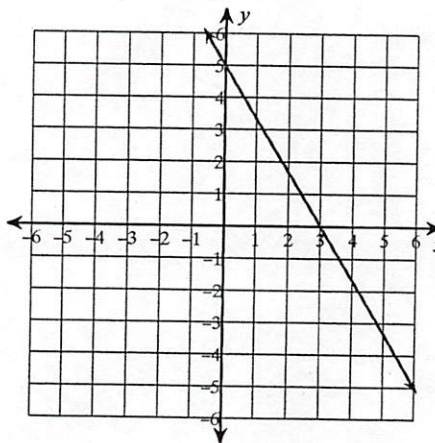


Sketch the graph of each line.

3) $x - 2y = 6$

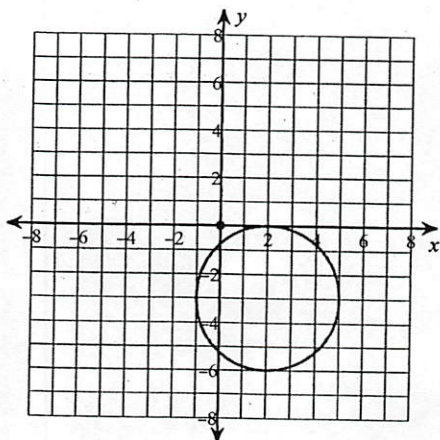


4) $y = -\frac{5}{3}x + 5$



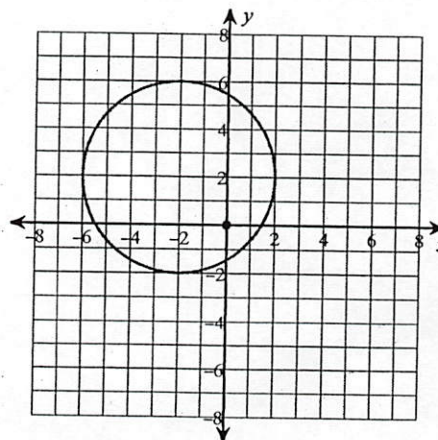
Identify the center and radius of each. Then sketch the graph.

5) $(x - 2)^2 + (y + 3)^2 = 9$



Center: (2, -3)
Radius: 3

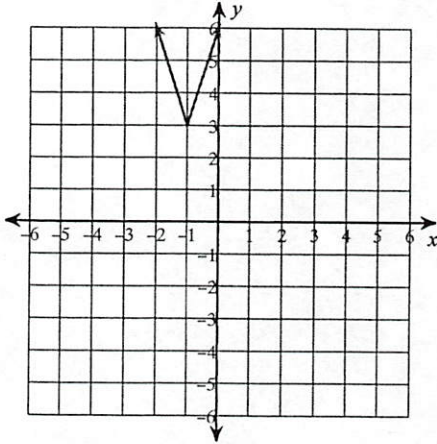
6) $(x + 2)^2 + (y - 2)^2 = 16$



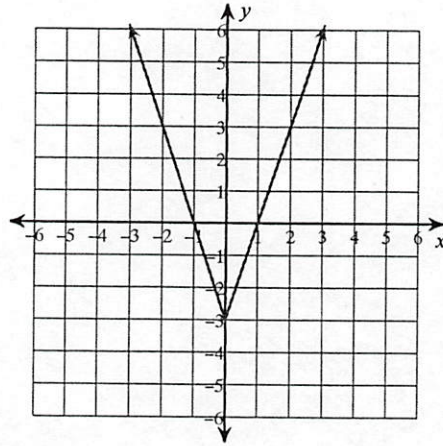
Center: (-2, 2)
Radius: 4

Graph each equation.

7) $y = 3|x + 1| + 3$



8) $y = 3|x| - 3$

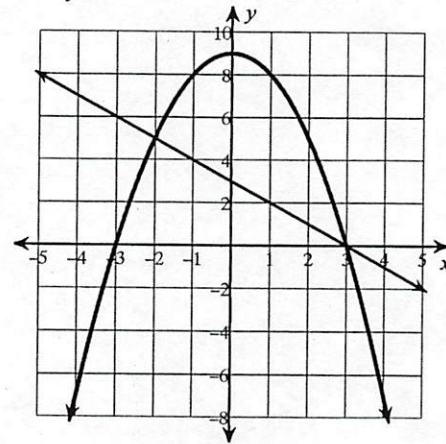
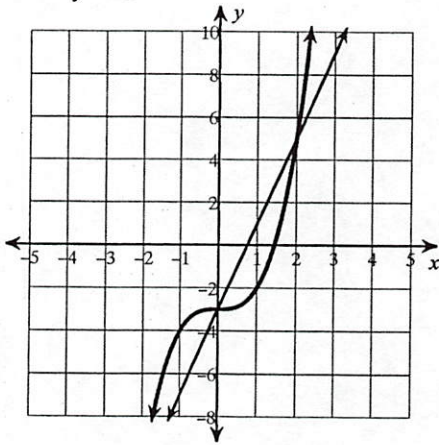


Two equations and their graphs are given. Find the intersection point(s)

9) $x^3 - y = 3$
 $4x - y = 3$

$(0, -3)$ and $(2, 5)$ $x^2 + y = 9$
 $x + y = 3$

$(-2, 5)$ and $(3, 0)$

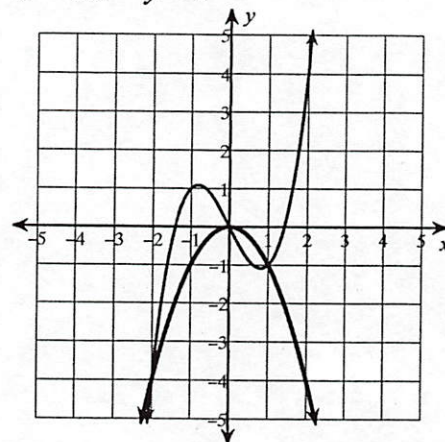
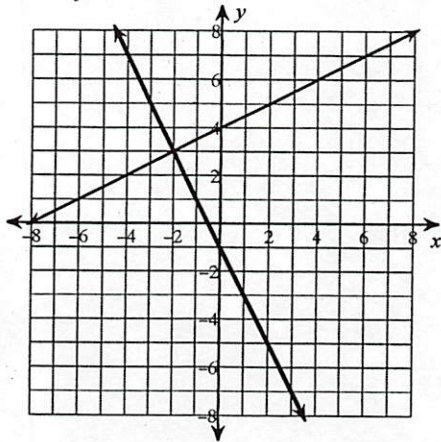


11) $2x + y = 8$
 $x - 2y = -6$

$(-2, 3)$

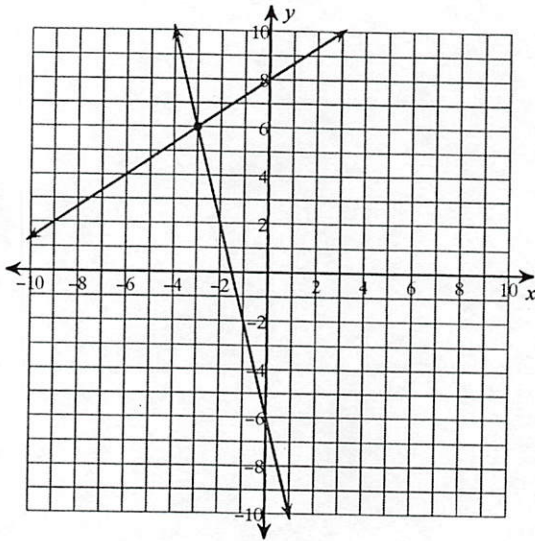
12) $x^2 + y = 0$
 $x^3 - 2x - y = 0$

$(0, 0)$ and $(1, -1)$



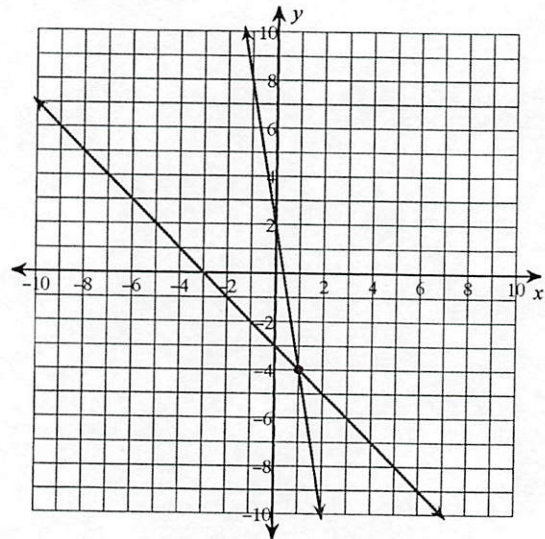
Solve each system by graphing.

13) $4x + y = -6$
 $2x - 3y = -24$



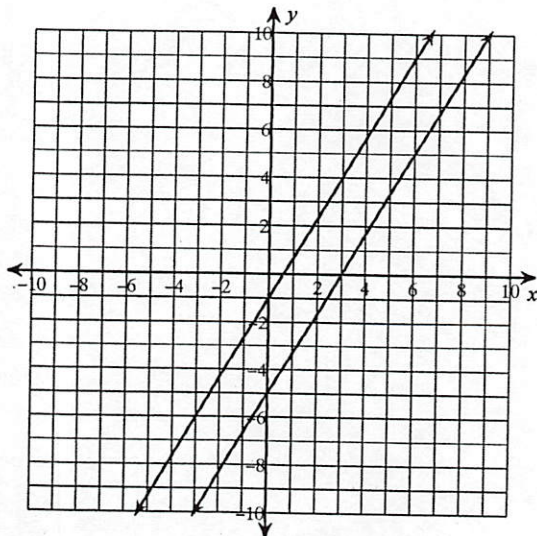
$(-3, 6)$

14) $x + y = -3$
 $6x + y = 2$



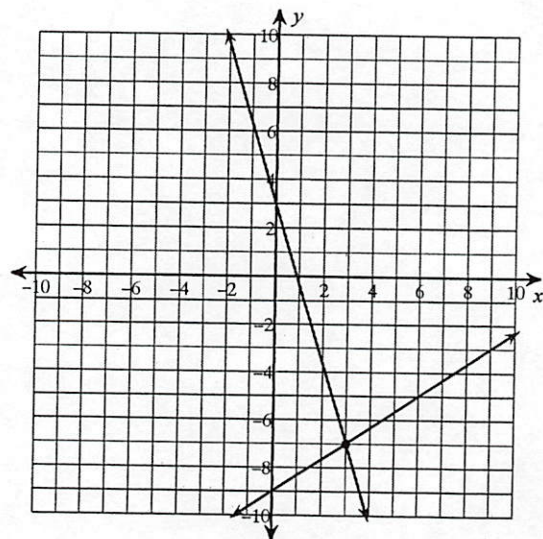
$(1, -4)$

15) $y = \frac{5}{3}x - 5$
 $y = \frac{5}{3}x - 1$



No solution

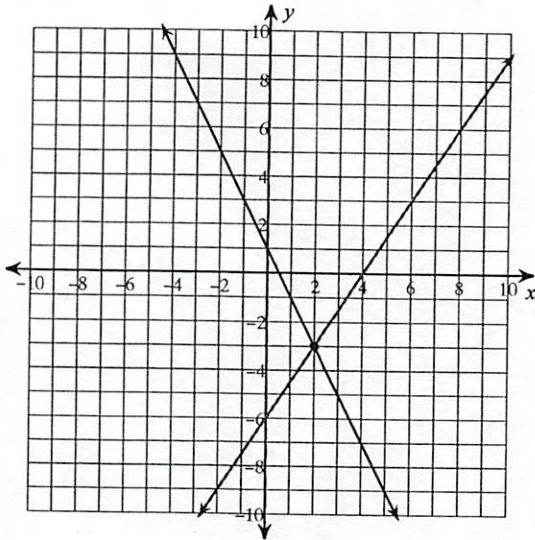
16) $y = \frac{2}{3}x - 9$
 $y = -\frac{10}{3}x + 3$



$(3, -7)$

17) $y = -2x + 1$

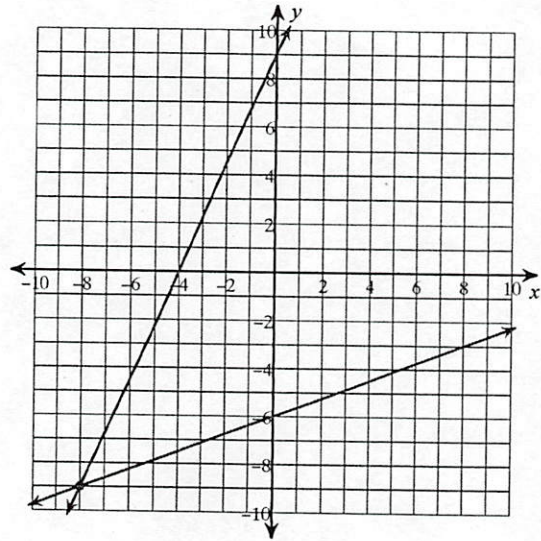
$y = \frac{3}{2}x - 6$



(2, -3)

18) $y = \frac{9}{4}x + 9$

$y = \frac{3}{8}x - 6$



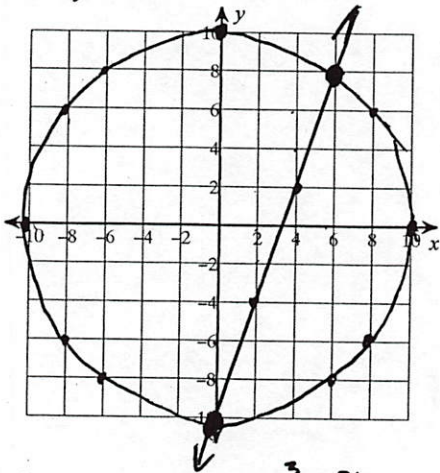
(-8, -9)

Graph the equations to find all solutions of the system of equations.

19) $x^2 + y^2 = 100$
 $3x - y = 10$

$y = 3x - 10$

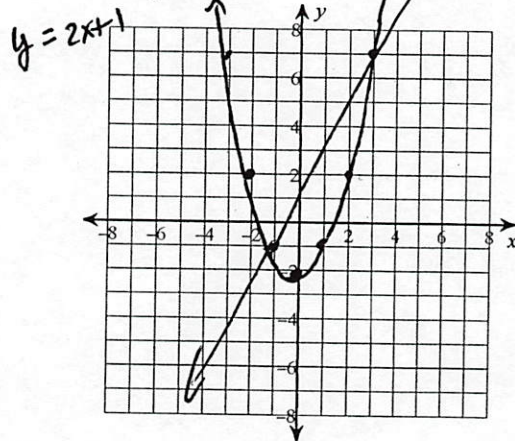
(6,8) and
 (0,-10)



20) $x^2 - y = 2$
 $2x - y = -1$

$y = x^2 - 2$

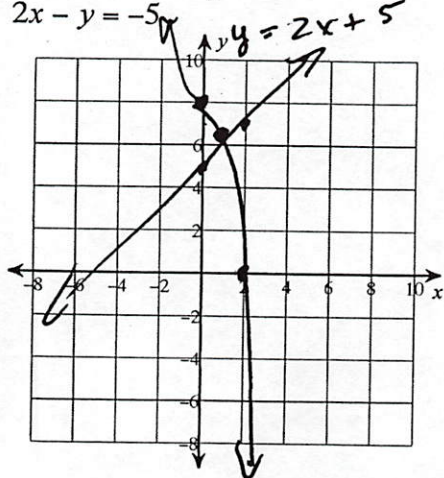
(-1,-1) and (3,7)



21) $x^3 + y = 8$
 $2x - y = -5$

$y = -x^3 + 8$

(1, 7)



22) $(x - 2)^2 + y^2 = 16$
 $y = |x - 2| - 4$

$c(2,0), r=4$

(2,-4), (6,0)
 and (-2,0)

