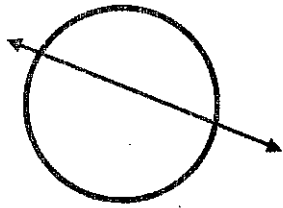
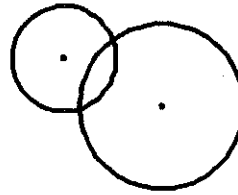


Intersection between a line and circle

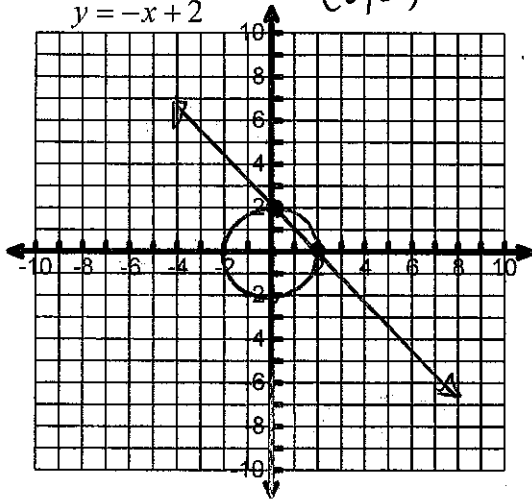


Intersection between two circles

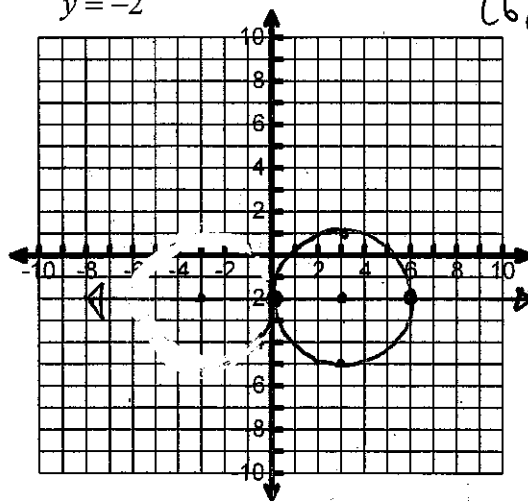


Solve by Graphing:

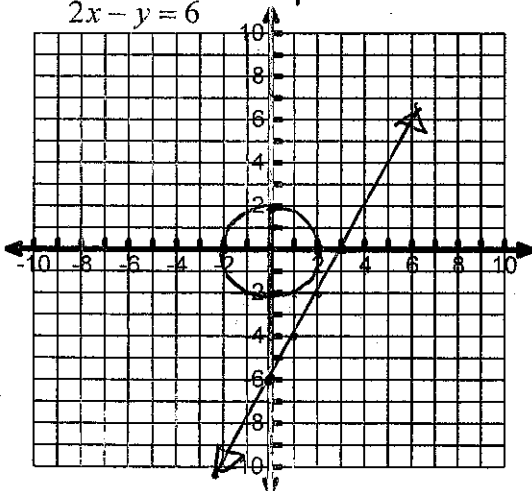
1. $x^2 + y^2 = 4$ $(2, 0)$
 $y = -x + 2$ $(0, 2)$



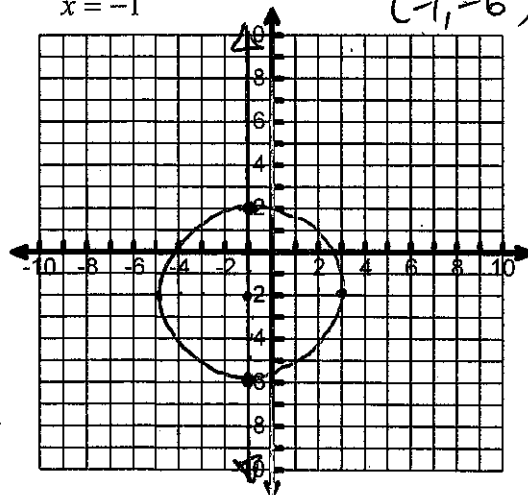
2. $(x-3)^2 + (y+2)^2 = 9$ $(0, -2)$
 $y = -2$ $(6, -2)$



3. $x^2 + y^2 = 4$
 $2x - y = 6$ $y = 2x - 6$ No solution



4. $(x+1)^2 + (y+2)^2 = 16$ $(-1, 2)$
 $x = -1$ $(-1, -6)$



Solve Algebraically:

5. $x^2 + (y-1)^2 = 26$
 $x = -1$

$$\begin{aligned} (-1)^2 + (y-1)(y-1) &= 26 \\ 1 + y^2 - 2y + 1 &= 26 \\ y^2 - 2y + 2 &= 26 \\ y^2 - 2y - 24 &= 0 \\ (y-6)(y+4) &= 0 \\ y &= 6, -4 \\ (-1, 6) \quad (-1, -4) \end{aligned}$$

6. $x^2 + y^2 = 34$
 $x - y = 2 \quad x = y + 2$

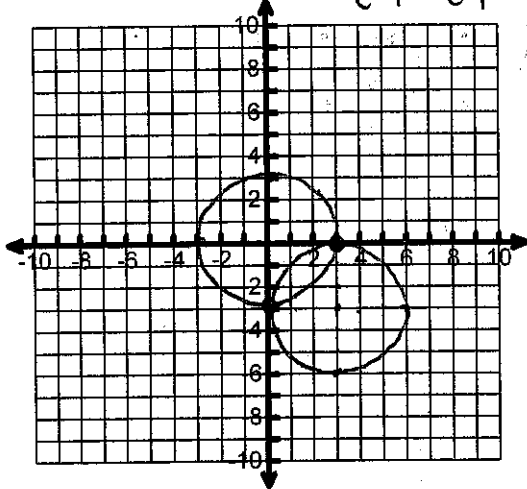
$$\begin{aligned} (y+2)(y+2) + y^2 &= 34 \\ y^2 + 4y + 4 + y^2 &= 34 \\ 2y^2 + 4y + 4 &= 34 \\ 2y^2 + 4y - 30 &= 0 \\ 2(y^2 + 2y - 15) &= 0 \\ 2(y+5)(y-3) &= 0 \\ y &= -5, 3 \\ x = -5+2 \quad x = 3+2 \\ x &= -3 \quad x = 5 \\ (-3, -5) \quad (5, 3) \end{aligned}$$

7. $x^2 + y^2 = 25$
 $2x + y = 10 \quad y = -2x + 10$

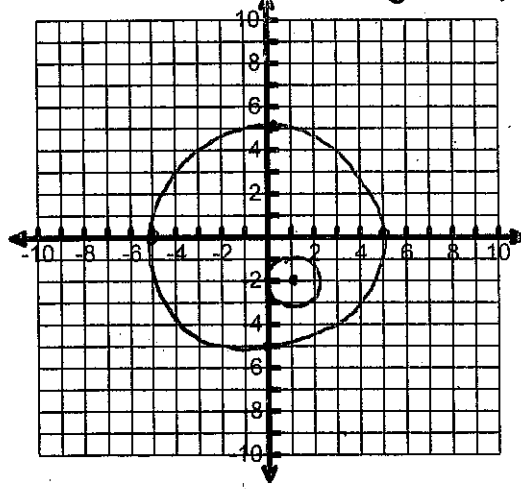
$$\begin{aligned} x^2 + (-2x+10)(-2x+10) &= 25 \\ x^2 + 4x^2 - 40x + 100 &= 25 \\ 5x^2 - 40x + 75 &= 0 \\ 5(x^2 - 8x + 15) &= 0 \\ 5(x-5)(x-3) &= 0 \\ x &= 5, 3 \\ -2(5)+10 \quad -2(3)+10 \\ -10+10 \quad -6+10 \\ 0 \quad 4 \\ (5, 0) \quad (3, 4) \end{aligned}$$

Solve by Graphing:

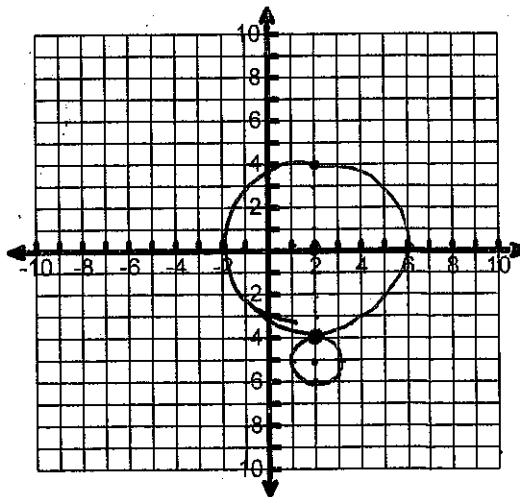
8. $x^2 + y^2 = 9$
 $(x-3)^2 + (y+3)^2 = 9 \quad (3, 0) \quad (0, -3)$



9. $x^2 + y^2 = 25$
 $(x-1)^2 + (y+2)^2 = 1 \quad \text{No solution}$



10. $(x-2)^2 + y^2 = 16$
 $(x-2)^2 + (y+5)^2 = 1$



$(2, -4)$