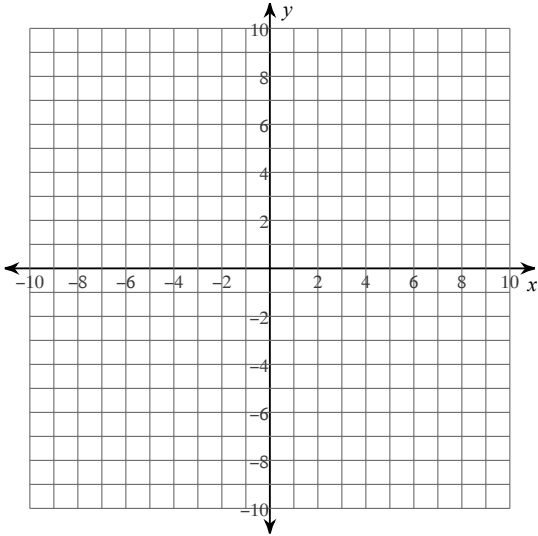


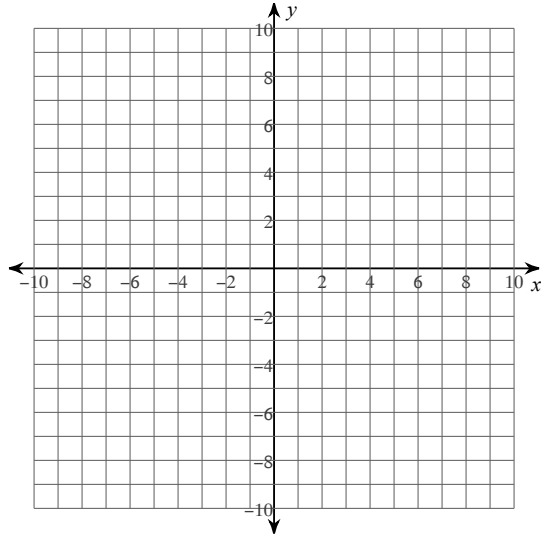
Unit 7 Systems of Equations Review

Solve the following systems by graphing.

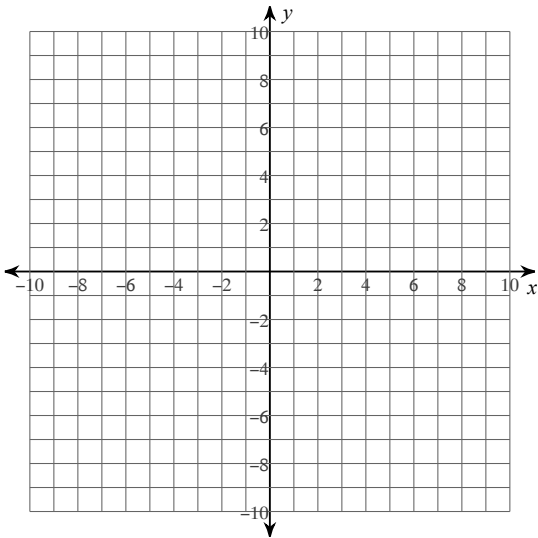
1) $y = 2x^2 + 8x + 10$
 $y = -2x - 2$



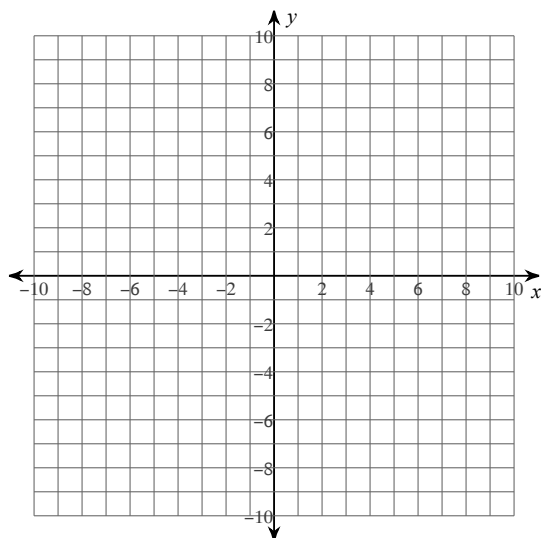
2) $y = x^2 + 4x - 2$
 $y = 6x - 3$



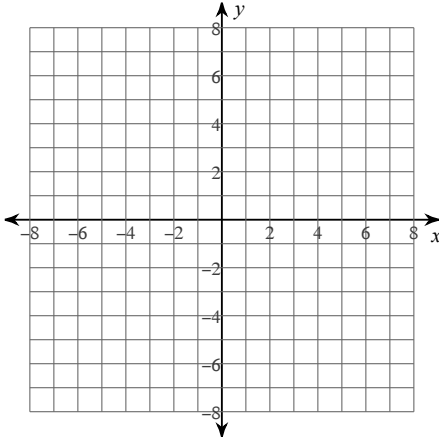
3) $x^2 + y^2 = 9$
 $y = x - 5$



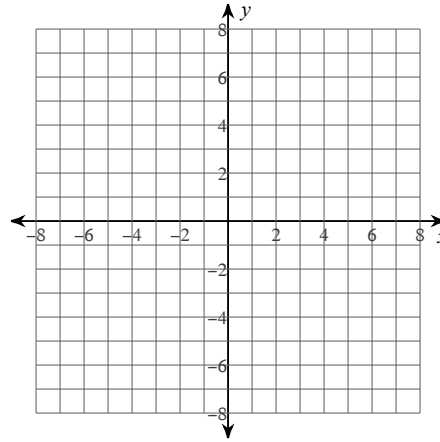
4) $x^2 + y^2 = 25$
 $y = \frac{3}{4}x$



$$5) \begin{aligned} x^2 + (y - 3)^2 &= 4 \\ y &= 2x + 3 \end{aligned}$$



$$6) \begin{aligned} y &= -x^2 - 4x - 2 \\ y &= x - 2 \end{aligned}$$



Solve each system by substitution.

$$7) \begin{aligned} y &= -2 \\ -x - 5y &= 9 \end{aligned}$$

$$8) \begin{aligned} -8x + 3y &= 13 \\ y &= 5x + 9 \end{aligned}$$

$$9) \begin{aligned} y &= x^2 - x - 12 \\ y &= x + 3 \end{aligned}$$

$$10) \begin{aligned} y &= x^2 + 4x + 3 \\ y &= 2x + 6 \end{aligned}$$

$$11) \begin{cases} (x+1)^2 + (y-4)^2 = 3 \\ y = -x \end{cases}$$

$$12) \begin{cases} x^2 + (y+2)^2 = 16 \\ y = x + 2 \end{cases}$$

$$13) \begin{cases} x^2 - 3y = -3 \\ y = x + 1 \end{cases}$$

$$14) \begin{cases} y = 3x - 2 \\ x^2 - 4y = 8 \end{cases}$$

15) Willie's school is selling tickets to a play. On the first day of ticket sales the school sold 7 adult tickets and 13 child tickets for a total of \$186. The school took in \$252 on the second day by selling 14 adult tickets and 14 child tickets. Find the price of an adult ticket and the price of a child ticket.

16) Julio and Carlos each improved their yards by planting rose bushes and geraniums. They bought their supplies from the same store. Julio spent \$174 on 6 rose bushes and 13 geraniums. Carlos spent \$144 on 12 rose bushes and 9 geraniums. What is the cost of one rose bush and the cost of one geranium?

17) The admission fee at a small fair is \$1.50 for children and \$4.00 for adults. On a certain day, 2200 people enter the fair and \$5050 is collected. How many children and how many adults attended?

Identify the center and radius of each.

18) $(x - 4)^2 + (y - 13)^2 = 9$

19) $(x - 3)^2 + (y - 1)^2 = 64$

20) $(x - 6)^2 + (y - 4)^2 = 16$

21) $(x - 3)^2 + (y + 3)^2 = 12$

22) $\left(x - \frac{1}{2}\right)^2 + (y - 6)^2 = 81$

23) $(x - 10)^2 + (y + 3)^2 = 169$

Use the information provided to write the equation of each circle.

24) Center: $(-6, -10)$
Radius: 5

25) Center: $(-8, -13)$
Radius: 4

26) Center: $(16, 13)$
Point on Circle: $(18, 15)$

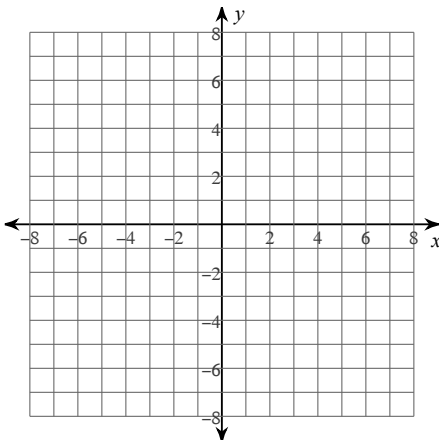
27) Center: $(1, 13)$
Point on Circle: $(2, 10)$

28) Center: $(0, 12)$
Point on Circle: $(-7, 12)$

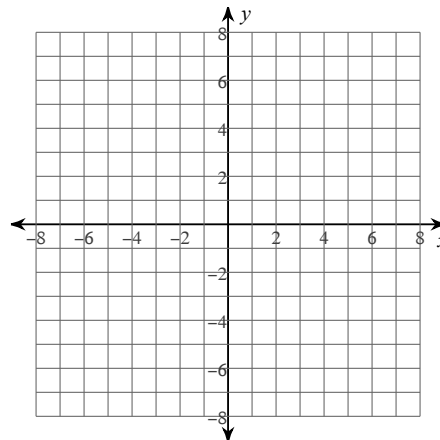
29) Center: $(-7, -16)$
Point on Circle: $(-4, -16)$

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

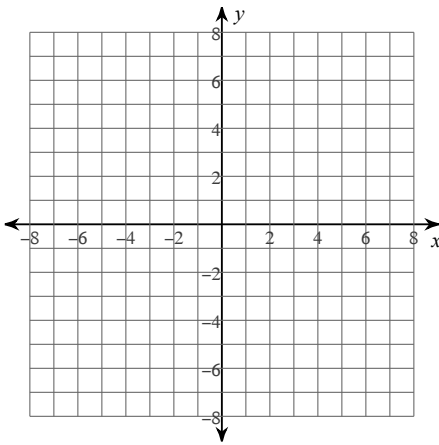
30) $(x + 2)^2 + (y - 2)^2 = 16$



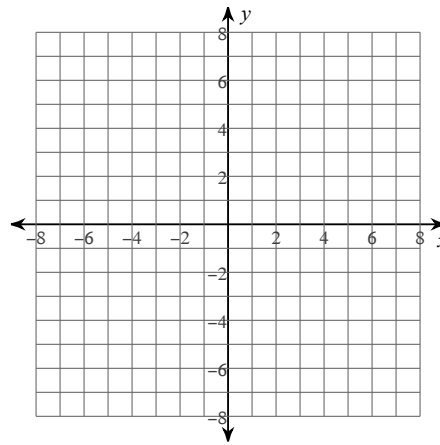
31) $(x - 4)^2 + (y + 3)^2 = 9$



$$32) (x - 3)^2 + (y + 2)^2 = 13$$

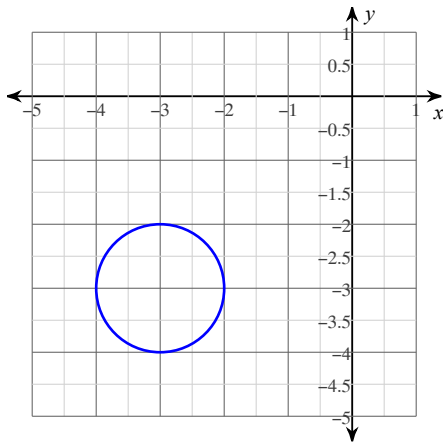


$$33) (x + 3)^2 + (y - 1)^2 = 16$$

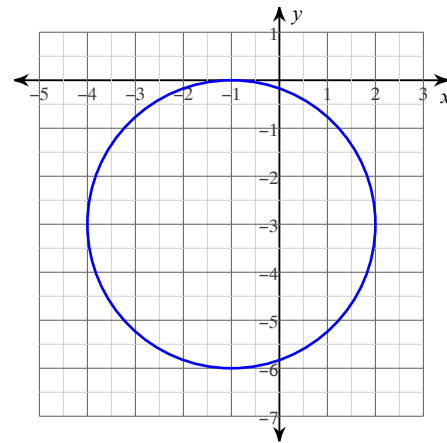


Use the information provided to write the equation of each circle.

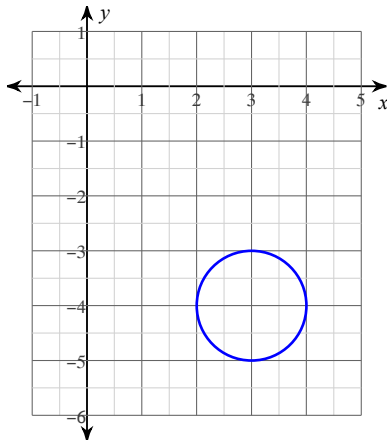
34)



35)



36)



37)

