

Name _____ Date _____

Find the distance $d(P_1, P_2)$ between the points P_1 and P_2 .

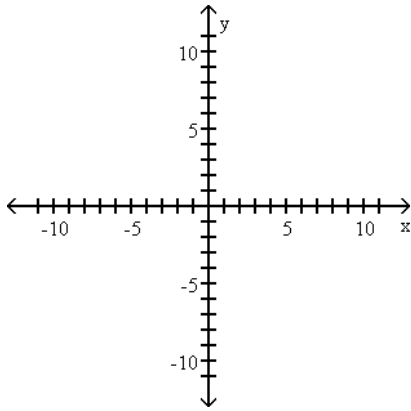
1) $P_1 = (1, -3)$; $P_2 = (-4, -15)$

Find the midpoint of the line segment joining the points P_1 and P_2 .

2) $P_1 = (-2, -9)$; $P_2 = (6, 9)$

Graph the equation by plotting points.

3) $5x + 3y = 15$



Solve the problem.

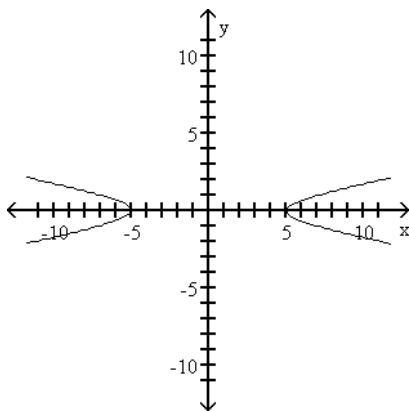
4) If $(a, 3)$ is a point on the graph of $y = 2x - 5$, what is a ?

List the intercepts for the graph of the equation.

5) $y^2 = x + 9$

List the intercepts of the graph. Tell whether the graph is symmetric with respect to the x-axis, y-axis, origin, or none of these.

6)

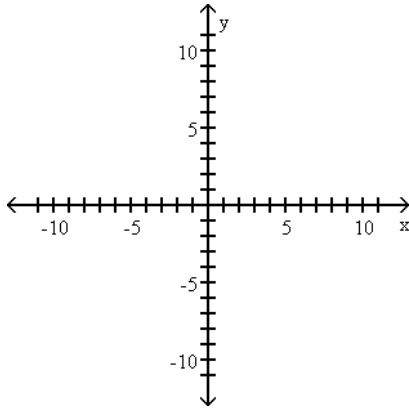


List the intercepts and type(s) of symmetry, if any.

7) $y^2 = x + 9$

Graph the line containing the point P and having slope m.

8) $P = (-2, 2)$; $m = -\frac{3}{2}$



Find an equation for the line, in the indicated form, with the given properties.

9) Containing the points $(4, -8)$ and $(-4, 3)$; slope-intercept form

Find the slope-intercept form of the equation of the line with the given properties.

10) Slope = 2; containing the point $(-6, -9)$

Write the equation in slope-intercept form.

11) $4x + 7y = 11$

Solve.

12) A truck rental company rents a moving truck one day by charging \$35 plus \$0.13 per mile. Write a linear equation that relates the cost C , in dollars, of renting the truck to the number x of miles driven. What is the cost of renting the truck if the truck is driven 140 miles?

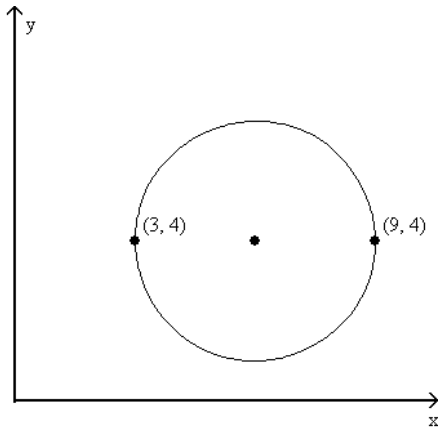
Find an equation for the line with the given properties.

13) Parallel to the line $x + 3y = 2$; containing the point $(0, 0)$

14) Perpendicular to the line $-5x - y = 4$; containing the point $(0, -\frac{4}{5})$

Write the standard form of the equation of the circle.

15)



Write the standard form of the equation of the circle with radius r and center (h, k) .

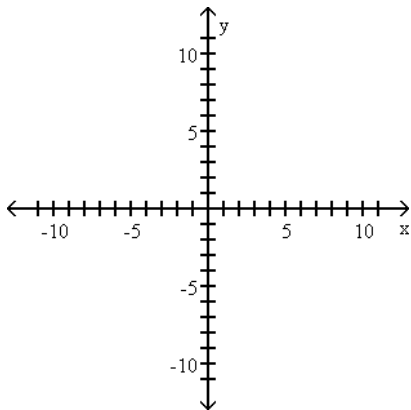
16) $r = 9$; $(h, k) = (0, -4)$

Find the center (h, k) and radius r of the circle with the given equation.

17) $x^2 + (y + 4)^2 = 49$

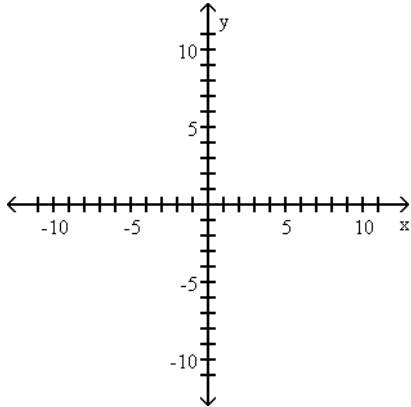
Graph the circle with radius r and center (h, k) .

18) $r = 3$; $(h, k) = (5, -4)$



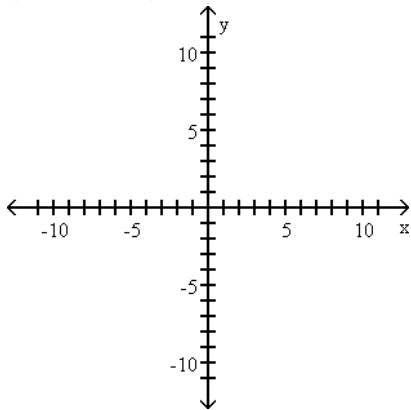
Graph the equation.

19) $x^2 + y^2 = 9$



Find the center (h, k) and radius r of the circle. Graph the circle.

20) $x^2 + y^2 - 12x - 8y + 48 = 0$



Solve the problem.

21) When the temperature stays the same, the volume of a gas is inversely proportional to the pressure of the gas. If a balloon is filled with 301 cubic inches of a gas at a pressure of 14 pounds per square inch, find the new pressure of the gas if the volume is decreased to 43 cubic inches.

If y varies inversely as x , write a general formula to describe the variation.

22) $y = 20$ when $x = \frac{1}{5}$

Write a general formula to describe the variation.

23) z varies jointly as the cube root of x and the square of y ; $z = 50$ when $x = 125$ and $y = 2$.