

HW 2

1

Perpendicular to the line  $y = 3x - 4$ ; containing the point  $(2, 4)$ .

Find also the intercepts of both equation. Graph both lines on the same coordinate axis.

2

Consider the following equation of a line that is in the general form:  $8x + 4y = 16$

a) Rewrite this equation in slope-intercept form.

b) Find the equation in slope-intercept form for the line which is parallel to this line and passes through the point  $(-7, 8)$

3

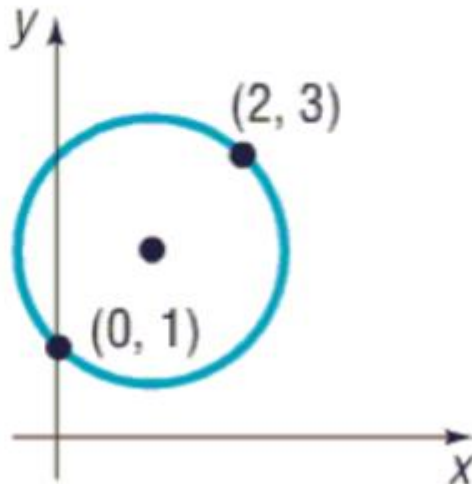
The equation  $3x - y = c$  defines a family of lines, one line for each value of  $c$ . On one set of coordinate axes, graph the members of the family when  $c = -3, c = 0, c = 3$ . Can you draw a conclusion from the graph about each member of the family?

4

Use slope to determine if the quadrilateral whose vertices are  $(-4, -7), (6, -5), (5, 0)$ , and  $(-5, -2)$  is a rectangle.

5

Find the standard form of the equation of the circle that is shown below.



6

Find the standard form of the equation of the circle centered at  $(1, -2)$  that is tangent to the  $x$  axis.