

## 1.1 Circle

$$93. (x-h)^2 + (y-k)^2 = r^2$$

Center  $(h, k)$ Radius  $r$ 

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

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

$$r^2 = 16$$

$$r = 4$$

Center  $(2, -3)$ Radius  $= 4$ 

$$(x-2)(x-2) + (y+3)(y+3) = 16$$

$$x^2 - 4x + 4 + y^2 + 6y + 9 = 16$$

$$x^2 + y^2 - 4x + 6y + 13 = 16$$

$$x^2 + y^2 - 4x + 6y - 3 = 0$$

$$\frac{20 - 16}{16}$$

$$16$$

$$.25$$

$$25\%$$

$$1.2$$

$$49 \quad (1, .6) \quad (-2, -.6)$$

$$\text{Find Slope } m = \frac{.6 - (-.6)}{1 - (-2)}$$

$$m = \frac{1.2}{3}$$

$$m = \frac{12}{30}$$

$$m = \frac{2}{5}$$

Choose 1 point  $(1, .6)$

Slope  
Substitute

$$y - y_1 = m(x - x_1)$$

$$y - .6 = \frac{2}{5}(x - 1)$$

$$y - .6 = \frac{2}{5}x - \frac{2}{5}$$

$$y - .6 = .4x - .4$$

$$y = \frac{2}{5}x + .2$$

$$y = \frac{2}{5}x + \frac{1}{5}$$

$$5y = 2x + 1$$

$$-5y \quad -5y$$

$$2x - 5y + 1 = 0$$

$$73. \quad 24 \text{ ft} \cdot \frac{12 \text{ in}}{1 \text{ ft}}$$

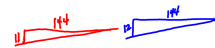
288 in run

22 m rise

$$\frac{22}{288}$$

$$\frac{11}{144} \quad \frac{1}{12}$$

$$\frac{11}{144} \quad \frac{12}{144}$$



$$(1995, 10.6) \quad (2000, 9.2)$$

$$m = \frac{10.6 - 9.2}{1995 - 2000}$$

$$m = \frac{1.4}{-5}$$

$$m = \frac{-1.4}{50}$$

$$m = \frac{-7}{25}$$

$$(2000, 9.2)$$

$$9.2 = \frac{-7}{25}(2000) + b$$

$$569.2 = b$$

$$y = \frac{-7}{25}x + 569.2$$

$$(-9, 11) \quad m = -3$$

$$y = mx + b$$

$$11 = -3(-9) + b$$

## 1.3 Direct Variation

$$d = rt$$

$$d = 75t$$

$$y = mx \quad m \text{ constant of variation}$$

$y$  is proportional to  $x$

$$x = 5 \quad y = 9$$

$$\frac{9}{5} = m \left( \frac{5}{5} \right)$$

$$\frac{9}{5} = m$$

$$y = \frac{9}{5}x$$