

Graphs of Equations in Two  
Variables; Circles

1. Write the standard form of the equation and the general form of the equation of each circle of radius  $r$  and center  $(h, k)$ . Graph each circle:  
(Similar to p.21 #83-92)

$$r = 4; \quad (h, k) = (3, -1)$$

2. (a) Find the center  $(h, k)$  and radius  $r$  of each circle; (b) graph each circle; (c) find the intercepts, if any  
(Similar to p.21 #93-106)

$$4(x + 3)^2 + 4(y - 2)^2 = 8$$

3. (a) Find the center  $(h, k)$  and radius  $r$  of each circle; (b) graph each circle; (c) find the intercepts, if any  
(Similar to p.21 #93-106)

$$x^2 + y^2 - 4x + 6y + 9 = 0$$

4. (a) Find the center  $(h, k)$  and radius  $r$  of each circle; (b) graph each circle; (c) find the intercepts, if any  
(Similar to p.21 #93-106)

$$x^2 + y^2 + x - 4y + \frac{13}{4} = 0$$

5. (a) Find the center  $(h, k)$  and radius  $r$  of each circle; (b) graph each circle; (c) find the intercepts, if any  
(Similar to p.21 #93-106)

$$9x^2 + 9y^2 + 6x + 6y - 79 = 0$$