

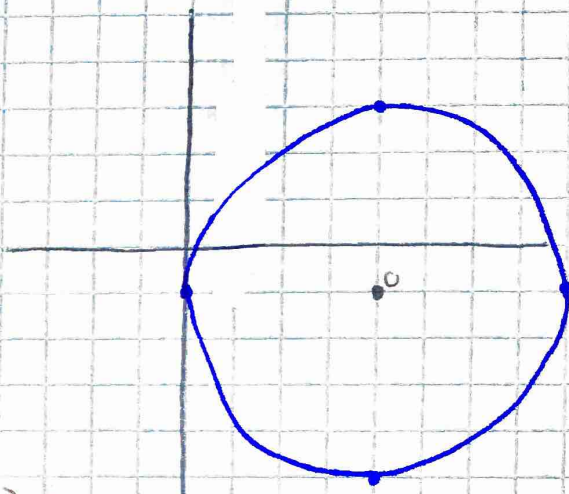
# Circles

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

Center:  $(h, k)$   
radius:  $r$

ex1  $(x-4)^2 + (y+1)^2 = 16$   
C:  $(4, -1)$   
 $r = 4$

ex2  $x^2 + (y-2)^2 = 9$   
C:  $(0, 2)$   
 $r = 3$



ex3 write the eq. center  $(4, -2)$  &  
 $r = \sqrt{3}$   
 $(x-4)^2 + (y+2)^2 = 3$

ex4 center  $(-1, 3)$  & solution  $(4, 6)$

$$r = \sqrt{(4+1)^2 + (6-3)^2}$$

$$r = \sqrt{25+9}$$

$$r = \sqrt{34}$$

$$(x+1)^2 + (y-3)^2 = 34$$

distance  
 $r = \sqrt{(x-m)^2 + (y-k)^2}$

ex5 center  $(0, 7)$  & solution  $(-2, 6)$

$$r = \sqrt{(-2-0)^2 + (7-6)^2}$$

$$r = \sqrt{4+1}$$

$$r = \sqrt{5}$$

$$x^2 + (y-7)^2 = 5$$