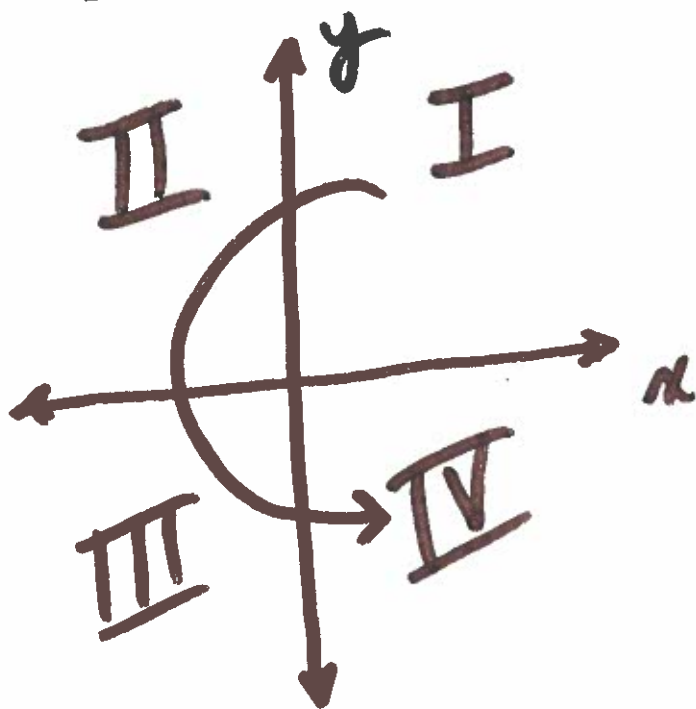


8/19/2020 PRE-CALC.

P2 Cartesian Coordinate System



ordered pair (x,y)

Absolute Value: magnitude (size)

[ie1]  $|-4| = 4$

[ie2]  $|5| = 5$

[ie3]  $|x| = 3$

$x = 3$

$x = -3$

①

$\boxed{x4} \quad |\pi - 6|$

$\oplus$  ↙

$+ |\pi - 6|$   
 $= \pi - 6$

↘  $\ominus$

$- |\pi - 6|$   
 $= -\pi + 6$

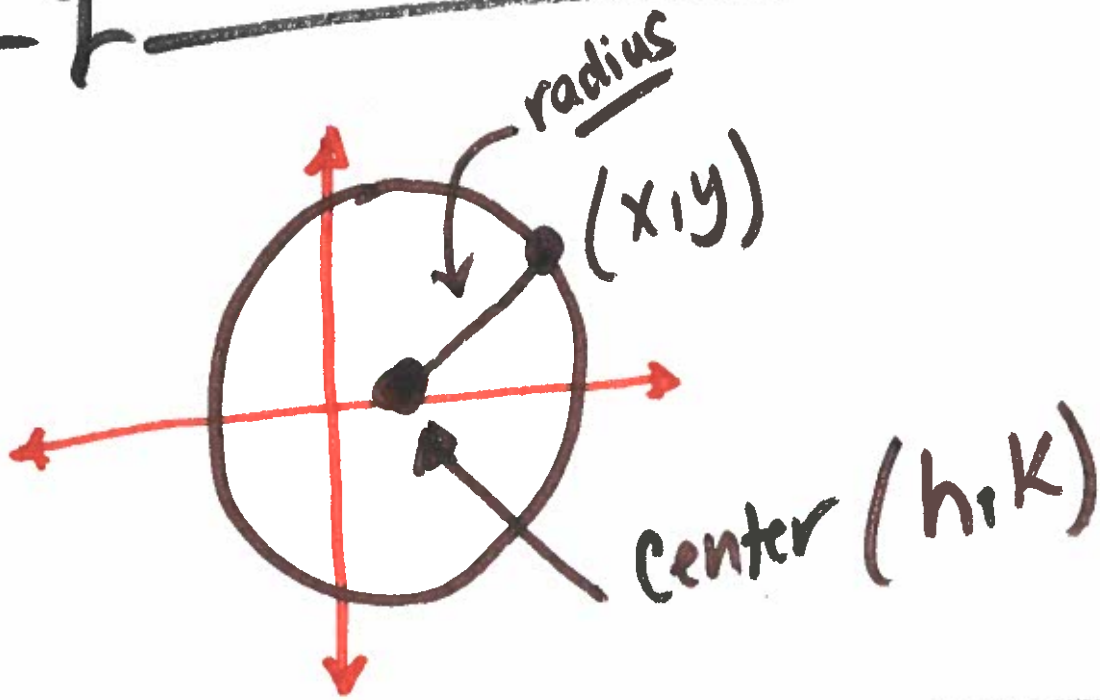
FORMULAS:

Distance:  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Pythagorean:  $a^2 + b^2 = c^2$

midpoint:  $mp = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

# Equations of Circles:



distance  
formula  
r = radius

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

alternative  
version

$$\underline{\underline{r^2 = (x-h)^2 + (y-k)^2}}$$

(equation)

ic1

Center  $(-4, 1)$   $r = 8$

Find standard form (equation)

FORMULA:

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

$$8^2 = (x+4)^2 + (y-1)^2$$

$$64 = (x+4)^2 + (y-1)^2$$

$$\sqrt{(x+4)^2 + (y-1)^2} = \sqrt{64}$$

$$\sqrt{(x+4)^2 + (y-1)^2} = 8$$

④