

Date: 04.09.19

1. Center - locates

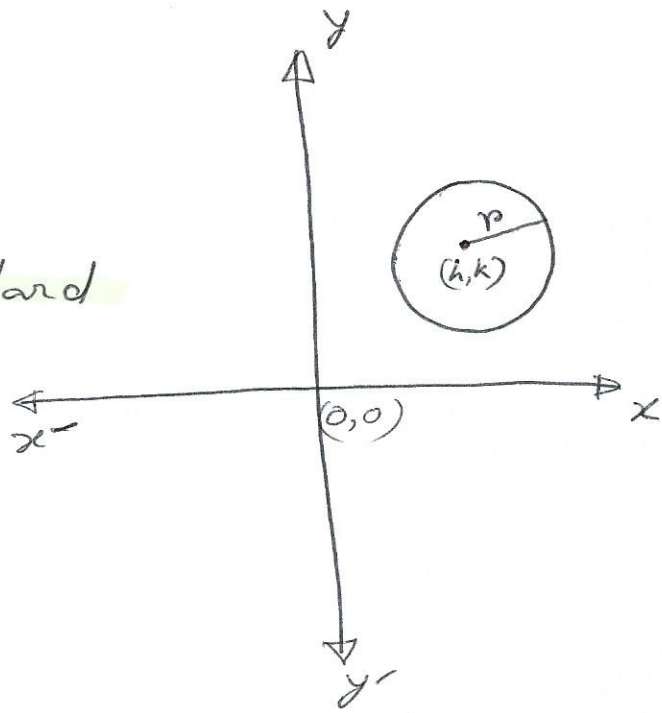
2. Radius - sizes

Q.

Equ. of a circle in standard

form w/ center (h, k)

& radius r .



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

(1) $(2, 7)$ - center rad. is 5.

$$(x-2)^2 + (y-7)^2 = 5^2 \text{ or } 25$$

(2) $(-4, 0)$ - center; radius is $\sqrt{10}$.

$$(x+4)^2 + y^2 = 10$$

③ center is the origin; $r = .02$

$$x^v + y^v = (0.02)^v$$

$$\Rightarrow x^v + y^v = 0.0004$$

④ $(x-7)^v + (y+2)^v = 121$

center $(7, -2)$; radius $\frac{11}{}$

⑤ $(x+3)^v + y^v = 40$

center $(-3, 0)$; radius = $\sqrt{40}$

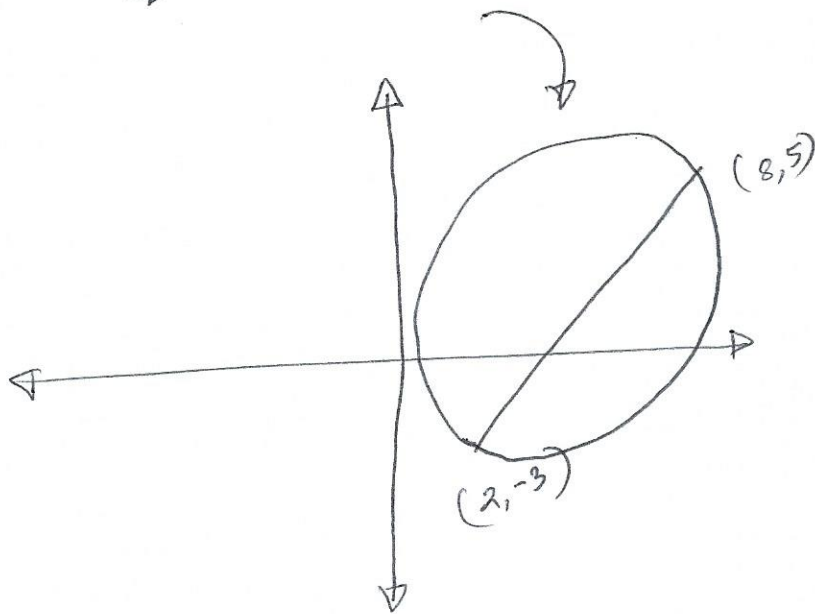
$$= \sqrt{4 \cdot 10}$$

$$= 2\sqrt{10}$$

$$\approx 6.32$$

⑥ $x^v + y^v = 0.0025$

equ. of this circle!



mid point formula - center

$$\left(\frac{2+8}{2}, \frac{-3+5}{2} \right) = \left(\frac{10}{2}, \frac{2}{2} \right)$$

$$= \boxed{(5, 1)}$$

distance formula - r

$$= \sqrt{(5-8)^2 + (1-5)^2}$$

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

$$= \sqrt{9+16}$$

$$= \sqrt{25} = \boxed{5}$$

equ. of the circle :

$$(x-5)^2 + (y-1)^2 = 25$$

1-2 Solving Linear Equations :

$$\begin{array}{r} 7x + 2 \\ -7x \\ \hline \end{array} = \begin{array}{r} 23 \\ -2 \\ \hline \end{array}$$

$$\frac{7x}{7} = \frac{21}{7}$$

$$\therefore \boxed{x = 3}$$

conditional equation.

an equation w/ one or no solⁿ.

$$\# 5y + 1 = 8y - 5 + 6y$$

$$\Rightarrow \begin{array}{r} 5y + 1 \\ -5y \\ \hline \end{array} = \begin{array}{r} 14y - 5 \\ -5y \\ \hline \end{array}$$

$$\Rightarrow \begin{array}{r} 1 \\ +5 \\ \hline \end{array} = \begin{array}{r} 9y - 5 \\ +5 \\ \hline \end{array}$$

$$\Rightarrow 6 = 9y$$

$$\Rightarrow \frac{6}{9} = \frac{2}{3}$$

$$\therefore \boxed{y = \frac{2}{3}}$$

$$2x+6 = 2(x+4)$$

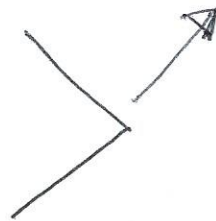
$$\Rightarrow \begin{array}{r} 2x+6 \\ -2x \end{array} = \begin{array}{r} 2x+8 \\ -2x \end{array}$$

$$6 = 8$$

No Solⁿ

① Variable disappeared!

② False statements



$$9x-10 = 5x+2(2x-5)$$

Identity
Everything works

$$\Rightarrow 9x-10 = 5x+4x-10$$

$$\Rightarrow \cancel{9x}-10 = \cancel{9x}-10$$

$$\Rightarrow -10 = -10$$

Solⁿ: all real number.