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$$P(1,-\sqrt{3})$$

$$\begin{cases} x+2y-2=0 \\ 3x-2y=6 \end{cases}$$

CENTRO

$$C(2,0)$$

$$\begin{cases} x=2-2y \\ 3(2-2y)-2y=6 \end{cases}$$

RAGGIO $\overline{CP} = \sqrt{(2-1)^2+(0+\sqrt{3})^2} =$

$$6-6y-2y=6$$

$$= \sqrt{1+3} = 2$$

$$y=0 \rightarrow x=2$$

$$(x-\alpha)^2+(y-\beta)^2=r^2$$

$$(x-2)^2+(y-0)^2=2^2$$

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

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

MODO ALTERNATIVO $P(1,-\sqrt{3})$ $C(2,0)$

$$(x-2)^2+(y-0)^2=r^2$$

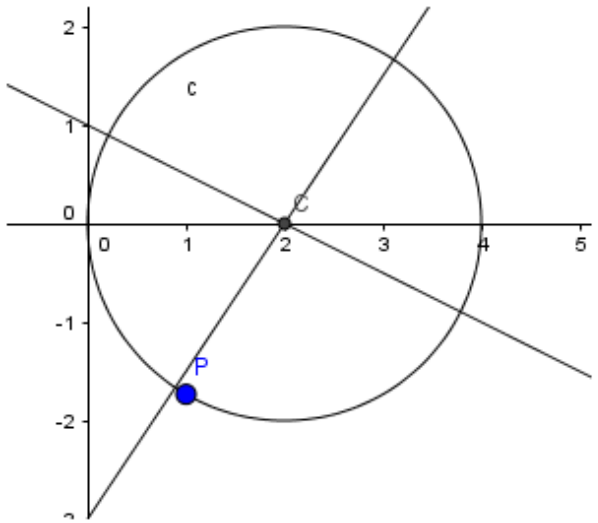
$$x^2-4x+4+y^2=r^2$$

SOSTITUISCO LE COORDINATE DI P

$$1-4+4+3=r^2 \Rightarrow r^2=4$$

$$x^2-4x+4+y^2=4$$

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



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DIAMETRO $\rightarrow$ $A(-3,1)$ $B(2,5)$

Il centro è il PUNTO MEDIO DEL SEGMENTO AB

$$C\left(\frac{-3+2}{2}, \frac{1+5}{2}\right) = \left(-\frac{1}{2}, 3\right)$$

RAGGIO $AC = \sqrt{\left(-3+\frac{1}{2}\right)^2+(1-3)^2} = \sqrt{\frac{25}{4}+4} =$

$$= \sqrt{\frac{41}{4}}$$

$$\left(x+\frac{1}{2}\right)^2+(y-3)^2 = \frac{41}{4}$$

$$x^2+\frac{1}{4}+x+y^2+9-6y-\frac{41}{4}=0$$

$$\boxed{x^2+y^2+x-6y-1=0}$$

199] $O(0,0)$ $A(3,\sqrt{3})$ $B(4,0)$

$$x^2+y^2+ax+by+c=0$$

a, b, c = INCOGNITE

$$\begin{cases} O \to & c=0 \\ A \to & 9+3+3a+\sqrt{3}b+c=0 \\ B \to & 16+0+4a+0+c=0 \end{cases}$$

$$\begin{cases} c=0 \\ 3a+\sqrt{3}b=-12 \\ 4a=-16 \end{cases}$$

$$a=-4$$

$$\begin{cases} c=0 \\ a=-4 \\ -12+\sqrt{3}b=-12 \end{cases} \qquad \begin{cases} c=0 \\ a=-4 \\ b=0 \end{cases}$$

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

FORMULA PER LA DISTANZA DI UN PUNTO $P(x_0, y_0)$ DA UNA RETTA $ax + by + c = 0$ (FORMA IMPLICITA)

$$d = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}}$$