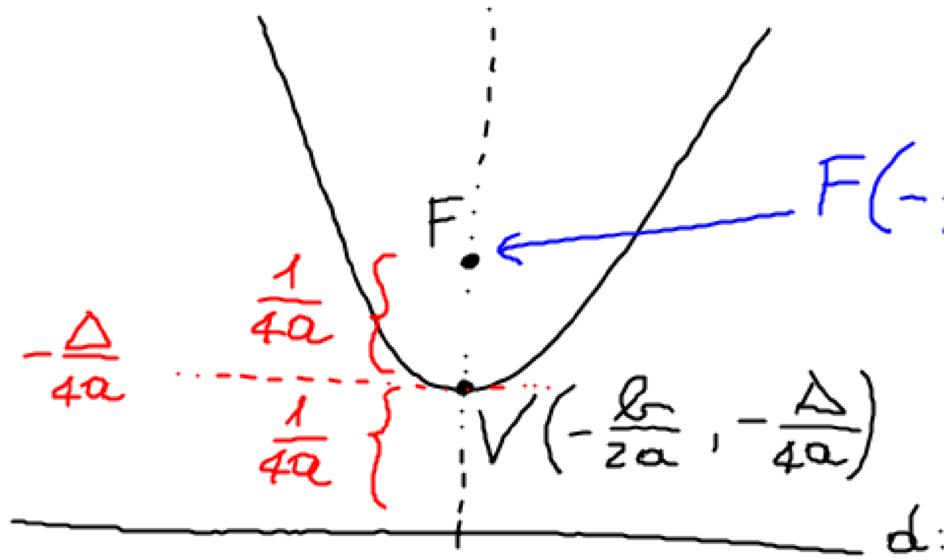


$$F\left(-\frac{b}{2a}, \overbrace{\frac{1-\Delta}{4a}}^{\frac{1}{4a}+\left(-\frac{\Delta}{4a}\right)}\right)$$

$$d:\ y = \underbrace{\frac{-1-\Delta}{4a}}_{-\frac{\Delta}{4a}-\frac{1}{4a}}$$

$$y = -\frac{1+\Delta}{4a}$$

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$$y = x^2 - 4x + 3$$

$$-\frac{b}{2a} = -\frac{-4}{2} = 2$$

$$\Delta = b^2 - 4ac =$$
$$= 16 - 12 = 4$$

ASSE: $x = 2$

VERTICE $V(2, -1)$

FUOCO $F\left(2, \frac{1-4}{4}\right) = \left(2, -\frac{3}{4}\right)$

DIRETTRICE $y = -\frac{1+4}{4}$

$$y = -\frac{5}{4}$$

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

$$-\frac{b}{2a} = -\frac{4}{-4} = 1$$

$$\Delta = 16$$

ASSE $x = 1$

$V(1, 2)$ $F\left(1, \frac{15}{8}\right)$

DIR. $y = \frac{17}{8}$ $\frac{-1-16}{4(-2)} = \frac{-17}{-8} = \frac{17}{8}$

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$$y = -\frac{1}{2}x^2 - \frac{1}{4}$$

$a = -\frac{1}{2}$ $\quad -\frac{b}{2a} = 0$

$b = 0$

$c = -\frac{1}{4}$ $\quad \Delta = 0^2 - 4\cdot\left(-\frac{1}{2}\right)\left(-\frac{1}{4}\right) =$

$= -\frac{1}{2}$

$$-\frac{\Delta}{4a} = -\frac{\cancel{-\frac{1}{2}}}{4\cdot\left(\cancel{-\frac{1}{2}}\right)} = -\frac{1}{4}$$

$$\frac{1-\Delta}{4a} = \frac{1-\left(-\frac{1}{2}\right)}{4\left(-\frac{1}{2}\right)} = \frac{1+\frac{1}{2}}{-2} = \frac{\frac{3}{2}}{-2} = -\frac{3}{2}\cdot\frac{1}{2} = -\frac{3}{4}$$

$$-\frac{1+\Delta}{4a} = -\frac{1-\frac{1}{2}}{-2} = -\frac{\frac{1}{2}}{-2} = \frac{1}{4}$$

ASSE $\quad x = 0$

$V\left(0, -\frac{1}{4}\right)$

$F\left(0, -\frac{3}{4}\right)$

DIR. $\quad y = \frac{1}{4}$

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

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

$$-\frac{b}{2a} = 2$$

$$\Delta = 16 - 8 = 8$$

$$-\frac{\Delta}{4a} = -\frac{8}{4} = -2$$

$$\frac{1-\Delta}{4a} = \frac{1-8}{4} = -\frac{7}{4}$$

$$-\frac{1+\Delta}{4a} = -\frac{1+8}{4} = -\frac{9}{4}$$

ASSE $x = 2$

$V(2, -2)$

$F\left(2, -\frac{7}{4}\right)$

$d$: $y = -\frac{9}{4}$

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$$F(-2,-1) \quad d: y=-3$$

$$\sqrt{(x+2)^2+(y+1)^2}=|y+3|$$

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

$$x^2+4+4x+\cancel{y^2}+1+2y=\cancel{y^2}+9+6y$$

$$x^2+5-9+4x=-2y+6y$$

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

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

$$y=\frac{1}{4}x^2+x-1$$

# MODO ALTERNATIVO

$F(-2,-1)$ $\qquad$ $y=-3$

$$y=ax^2+bx+c$$

OBIETTIVO = trovare $a, b, c$

$F\left(-\frac{b}{2a}, \frac{1-\Delta}{4a}\right)$ $\qquad$ $y=-\frac{1+\Delta}{4a}$

$$\begin{cases} -\frac{b}{2a}=-2 \\ \frac{1-\Delta}{4a}=-1 \\ -\frac{1+\Delta}{4a}=-3 \end{cases} \quad \begin{cases} b=4a \\ 1-\Delta=-4a \\ 1+\Delta=12a \\ \hline 2=8a \end{cases} \quad \begin{cases} b=4a \Longrightarrow b=4\cdot\frac{1}{4}=1 \\ 1+\Delta=12a \\ 2=8a \Longrightarrow a=\frac{2}{8}=\frac{1}{4} \end{cases}$$

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