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x_0 y

$P(4, y)$

1 variabile y

2 $y \in \mathbb{R}$

$y = x - 3$

$a=1 \quad b=-1 \quad c=-3$

$x - y - 3 = 0$

3 $\overline{PH} = |y - 2|$

$$\overline{PK} = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2+b^2}} = \frac{|4 - y - 3|}{\sqrt{1^2+1^2}} = \frac{|1-y|}{\sqrt{2}}$$

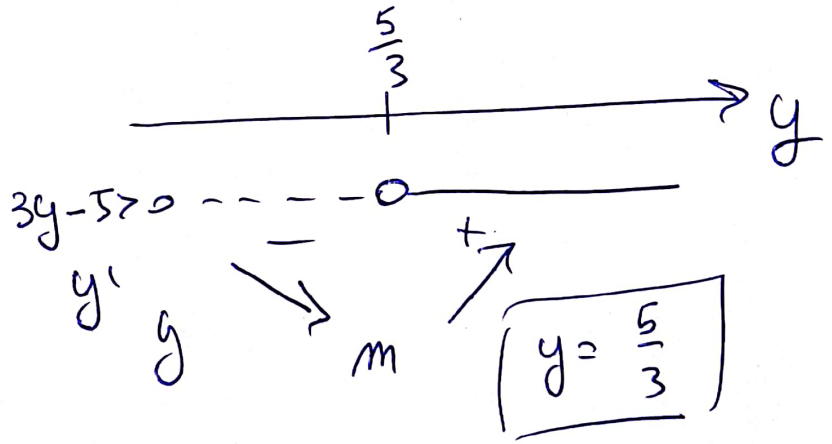
FUNZIONE OBIETTIVO

$$F(y) = \overline{PH}^2 + \overline{PK}^2 = (y-2)^2 + \frac{(1-y)^2}{2}$$

$$F'(y) = 2(y-2)\cdot 1 + \frac{1}{2} \cdot 2(1-y)(-1) =$$

$$= 2y - 4 - 1 + y =$$

$$= 3y - 5 = 0 \qquad \boxed{y = \frac{5}{3}}$$



$\boxed{y = \frac{5}{3}}$

4 ✓