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CALCOLARE L'INVERSA

$f: \mathbb{R}_0^+ \to \mathbb{R}_0^+$

$f(x) = \sqrt{5x}$

$f^{-1}: \mathbb{R}_0^+ \to \mathbb{R}_0^+$

$f^{-1}(x) = \frac{x^2}{5}$

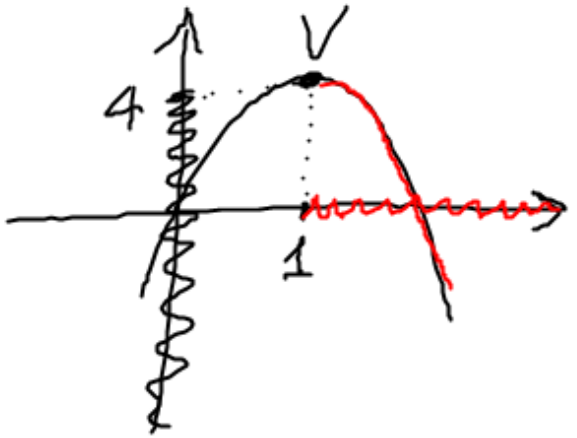
$y = \sqrt{5x}$

$x = \sqrt{5y}$

$x^2 = 5y$

$y = \frac{x^2}{5}$

237 $f(x) = -4x^2 + 8x$



$y = -4x^2 + 8x$ $\quad D : \mathbb{R}$

$f : [1, +\infty) \to (-\infty, 4]$

$x = -4y^2 + 8y$

$4y^2 - 8y + x = 0$

$y = \dfrac{4 \pm \sqrt{16 - 4x}}{4}$

ASCISSA DEL VERTICE

$x_V = -\dfrac{b}{2a} = 1$

ORDINATA DEL VERTICE

$y_V = -4 + 8 = 4$

$f^{-1}(x) = \dfrac{4 + \sqrt{16 - 4x}}{4}$ $\quad f^{-1} : (-\infty, 4] \to [1, +\infty)$

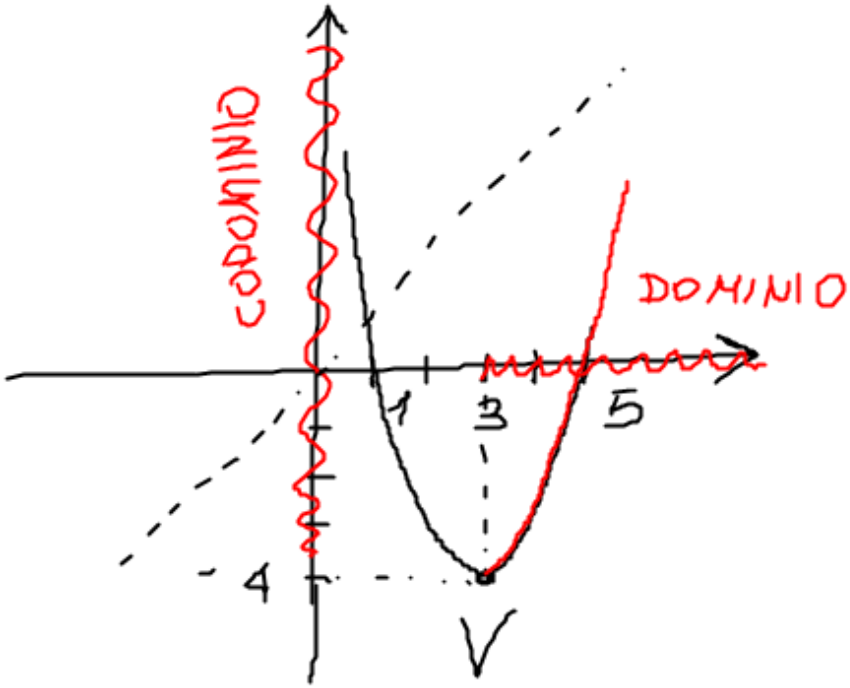
$$y = x^2 - 6x + 5$$

$$V(3, -4)$$

$$-\frac{b}{2a} = -\frac{-6}{2} = 3$$

$$f(x) = x^2 - 6x + 5$$

$$f: [3, +\infty) \to [-4, +\infty)$$



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

$$y^2 - 6y + 5 - x = 0$$

$$y = 3 \pm \sqrt{9 - (5 - x)} \qquad y = 3 \pm \sqrt{4 + x}$$

$$f^{-1}(x) = 3 + \sqrt{4 + x}$$

$$f^{-1}: [-4, +\infty) \to [3, +\infty)$$