



$y_1 = x^2$

$y_2 = 2^x$

variazione della x

x = avanzamento

accumulatore = 100000000 passo = $\frac{1}{10}$

contatore = floor(\log_{10} [accumulatore])

avanzamento = contatore passo

avanzamento = 0.8 Calculate

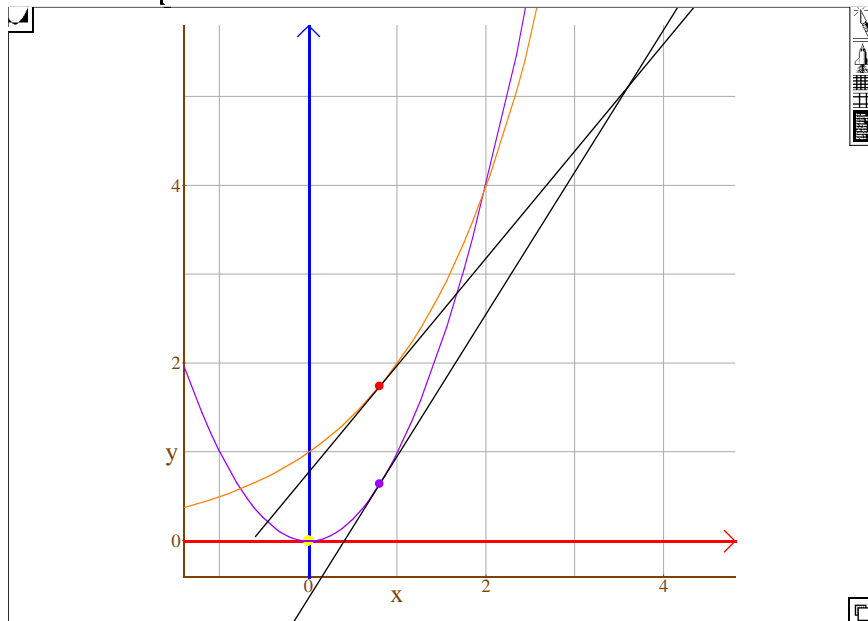


controlli della figura

dimensionepunti = 5

visualizzapunti = 1

vs = $\begin{cases} 1 & (\text{visualizzapunti} = 1) \\ ? & (\text{visualizzapunti} \neq 1) \end{cases}$



- 1.4 ... 4.8 = left...right True Proportions
 - 0.4 ... 5.8 = bottom...top cropping Moderately

Declarations

assi cartesiani e origine

funzioni

Line at (x, y_1) where $x =$ left ... right with a normal line, colored Purple .

Line at (x, y_2) where $x =$ left ... right with a normal line, colored Orange .

tangenti

Line at $\left(t, \left[\frac{\partial}{\partial x} y_1\right] t\right) + (x, y_1)$ where $t =$ left ... right with a normal line, colored Black .

Line at $\left(t, \left[\frac{\partial}{\partial x} y_2\right] t\right) + (x, y_2)$ where $t =$ left ... right with a normal line, colored Black .

Scatter plot of (x, y_2) vs where ? using dimensionepunti point spots colored Red .

Scatter plot of (x, y_1) vs where ? using dimensionepunti point spots colored Purple .



definizione di logaritmo

Upon Transform transform

$\log_y(z) = x$ into $y^x = z$.

Upon Transform transform $y^x = z$

into $\log_y(z) = x$.

☑ Upon Transform transform $z = y^x$
into $\log_y(z) = x$.

🗣️ regola del logaritmo del prodotto

$\log_b(cf)$

$\log_b(c) = x$

$\Delta b^x = c$ Transform

$\log_b(f) = y$

$\Delta b^y = f$ Transform

cf

$\Delta cf = b^x f$ Substitute

$\Delta cf = b^x b^y$ Substitute

$\Delta cf = b^{x+y}$ Simplify

$\Delta \log_b(cf) = x + y$ Transform

$\Delta \log_b(cf) = \log_b(c) + y$ Substitute

$\Delta \log_b(cf) = \log_b(c) + \log_b(f)$ Substitute

🗣️ regola del logaritmo dell'inverso

$\log_b\left(\frac{1}{c}\right) = x$

$\Delta b^x = \frac{1}{c}$ Transform

$\Delta b^x = \frac{1}{b^y}$ Substitute

$\log_b(c) = y$

$\Delta b^y = c$ Transform

b^{-y}

$\Delta b^{-y} = \frac{1}{b^y}$ Transform

$\Delta b^{-y} = b^x$ Substitute

$\Delta \log_b(b^x) = -y$ Transform

$\Delta \log_b(b^{-y}) = -y$ Substitute

$\Delta \log_b(b^{-y}) = x$ Transform

$\Delta -y = x$ Substitute

$\Delta -y = \log_b\left(\frac{1}{c}\right)$ Substitute

$\Delta -\log_b(c) = \log_b\left(\frac{1}{c}\right)$ Substitute

🗣️ regola del logaritmo del quoziente

$\log_a\left(b\frac{1}{c}\right)$

$\Delta \log_a\left(b\frac{1}{c}\right) = \log_a(b) + \log_a\left(\frac{1}{c}\right)$ Expand

$\Delta \log_a\left(b\frac{1}{c}\right) = \log_a(b) - \log_a(c)$ Transform

$\Delta \log_a\left(\frac{b}{c}\right) = \log_a(b) - \log_a(c)$ Simplify

🗣️ regola del logaritmo della potenza

$\log_b(a^c) = x$

$\Delta b^x = a^c$ Transform

$\log_b(a) = y$

$\Delta b^y = a$ Transform

$\Delta (b^y)^c = a^c$ Apply

$\Delta (b^y)^c = b^x$ Substitute

$\Delta b^{cy} = b^x$ Simplify

$\Delta \log_b(b^x) = cy$ Transform

$$\Delta \log_b(b^{c y}) = x \quad \text{Transform}$$

$$\Delta \log_b(b^x) = x \quad \text{Substitute}$$

$$\Delta c y = x \quad \text{Substitute}$$

$$\Delta c y = \log_b(a^c) \quad \text{Substitute}$$

$$\Delta c \log_b(a) = \log_b(a^c) \quad \text{Substitute}$$

🗣️ regola della cocatenazione dei logaritmi

$$\square \log_b(a) \log_a(c)$$

$$\square \log_b(a) = x$$

$$\Delta b^x = a \quad \text{Transform}$$

$$\square \log_a(c) = y$$

$$\Delta a^y = c \quad \text{Transform}$$

$$\Delta (b^x)^y = c \quad \text{Substitute}$$

$$\Delta b^{x y} = c \quad \text{Simplify}$$

$$\Delta \log_b(c) = x y \quad \text{Transform}$$

$$\Delta \log_b(c) = \log_b(a) y \quad \text{Substitute}$$

$$\Delta \log_b(c) = \log_b(a) \log_a(c) \quad \text{Substitute}$$

$$\blacksquare b = c$$

$$\Delta \log_b(c) = \log_b(a) \log_a(b) \quad \text{Substitute}$$

$$\Delta \log_b(b) = \log_b(a) \log_a(b) \quad \text{Substitute}$$

$$\Delta 1 = \log_b(a) \log_a(b) \quad \text{Substitute}$$

$$\Delta 1^{-1} (1 [\log_a\{b\}]^{-1}) = \log_b(a) \quad \text{Move Over}$$

$$\Delta \frac{1}{(\log_a[b])^1} = \log_b(a) \quad \text{Simplify}$$

$$\Delta \frac{1}{\log_a(b)} = \log_b(a) \quad \text{Simplify}$$

$$\square b^1$$

$$\Delta b^1 = b \quad \text{Simplify}$$

$$\Delta \log_b(b) = 1 \quad \text{Transform}$$