

## Esercizi sulle disequazioni esponenziali e logaritmiche

- $2^x > \frac{1}{16}$
- $\left(\frac{1}{3}\right)^x > 9$
- $4^{5x-1} < 2$
- $81^x \leq \frac{1}{3}$
- $3^{-x^2+4x} > 81$
- $5^{2(x-2)}(5^{2(x-1)})^{x+1} > 125^{x-1}$
- $5^{\frac{1}{x^2}} > 1$   $[x \neq 0]$
- $3^{\frac{1}{x}} 3^{\frac{1}{x+1}} < 3$
- $2^{\frac{x}{x+1}} > 1$
- $\left(\left(\frac{1}{7}\right)^{x+1}\right)^x > \frac{1}{49}$
- $(3^{x-1})^{x+1} > 27$
- $\left(\frac{1}{2}\right)^{x^2+1} > \left(\frac{1}{2}\right)^2$
- $\left(\frac{\sqrt{2}}{2}\right)^{9x} > \left(\frac{\sqrt{2}}{2}\right)^{\frac{1}{x}}$
- $\log(x^2 + 1) > \log(2x + 4)$   $[-\frac{3}{2} < x < -1 \text{ e } x > 3]$
- $2 \log_5 x \geq 3$   $[x \geq \sqrt{125}]$
- $\log(2x - 3) + \log(x - 1) > 0$
- $\log x - \log 3 < \log(x + 2)$   $[x > 0]$
- $\log_3(x + 1) + \log x < \log(5x - 3)$   $[1 < x < 3]$
- $\log_{\frac{1}{2}}(x + 1) + \log_{\frac{1}{2}}(6x - 2) - \log_{\frac{1}{2}}(5x + 1) > \log_{\frac{1}{2}} 4$   $[\frac{1}{2} < x < 3]$
- $\frac{1}{3} \log(x + 1) < 0$
- $\log_3 \log_3(4x + 6) < 0$
- $\text{Log}(2x^2 - x) < 0$
- $\text{Log}(x^2 - 13x - 14) > 2$
- $\log_{\frac{1}{2}} x \geq -1$