

Disequazioni esponenziali

1. $4^x > 2$
2. $\left(\frac{1}{3}\right)^{(1-12x)x} < 3$
3. $8^{x+1} \geq 2^{x^2}$
4. $e^{4x^4-5x^2+1} \leq 1$
5. $e^{|x-1|} < e^x$

Soluzioni

1. $]\frac{1}{2}, +\infty[$
2. $]-\frac{1}{4}, \frac{1}{3}[$
3. $\left[\frac{3-\sqrt{21}}{2}, \frac{3+\sqrt{21}}{2}\right]$
4. $]-1, -\frac{1}{2}[\cup]\frac{1}{2}, 1[$
5. $]\frac{1}{2}, +\infty[$

Disequazioni logaritmiche

1. $\log_5 x > 2$
2. $\log_3 x < \frac{1}{2}$
3. $\log_{\frac{1}{7}} x < \sqrt{2}$
4. $\log_{\frac{1}{5}}(x^2 + 4x) > -1$
5. $\log(1 + \frac{1}{x}) \leq 1$
6. $\log(x - 1) < -1$
7. $\log_{\frac{1}{2}}(3x - 2x^2) < 0$
8. $\log_2[x^2(x^2 - 2)] < 3$
9. $\log x^2 > \log x$
10. $\log(x^4 - 4x^2 + 5) \geq \log(x^2 + 1)$

Soluzioni

1. $]25, +\infty[$
2. $]0, \sqrt{3}[$
3. $] (\frac{1}{7})^{\sqrt{2}}, +\infty [$
4. $] -5, -4[\cup]0, 1[$
5. $] -\infty, -1[\cup [\frac{1}{e-1}, +\infty[$
6. $]1, 1 + \frac{1}{e}[$
7. $] \frac{1}{2}, 1[$
8. $] -2, -\sqrt{2}[\cup] \sqrt{2}, 2[$
9. $]1, +\infty[$
10. $] +\infty, -2] \cup [-1, 1] \cup [2, +\infty[$