

Disequazioni esponenziali fratte

1	$\frac{7^x + 1}{4^x - \frac{1}{2}} > 0$	$x > -\frac{1}{2}$
2	$\frac{2^{-x} - 4^{-1}}{\sqrt{2} - 2^x} \geq 0$	$x < \frac{1}{2} \cup x \geq 2$
3	$\frac{3^x + 2}{3^x - 2} < 0$	$x < \log_3 2$
4	$\frac{8^{3x} - 1}{2^{-3x} - 8} > 0$	$-1 < x < 0$
5	$\frac{5^x - 1}{25 - 5^x} > 0$	$0 < x < 2$
6	$\frac{0,1^x - 100}{100^x - 0,001} < 0$	$x < -2 \cup x > -\frac{3}{2}$
7	$\frac{3^{2x+2} - \frac{1}{3}}{3^{2x} - 81} > 0$	$x < -\frac{3}{2} \cup x > 2$
8	$\frac{7^{-x} - 343}{1 - (2\sqrt{2})^x} \leq 0$	$-3 \leq x < 0$
9	$\frac{5 - 2^{-x}}{2^x + 1} > 0$	$x > -\frac{\ln 5}{\ln 2}$
10	$\frac{3^{-x} + 2}{27 - 3^{x+1}} < 0$	$x > 2$
11	$\frac{e^{-x} + e^x}{e^{4x} - 4} \leq 0$	$x < \ln \sqrt{2}$
12	$\frac{3}{2^x} < 2^x$	$x > \log_2 \sqrt{3}$
13	$\frac{4^{5x+8} + 12}{4^{x+5} - 2} < 0$	$x < -\frac{9}{2}$

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14	$\frac{5^{2x-1} - 5^x + \frac{4}{5}}{7^{x+2} - 49} < 0$	$x < \log_5 4 \cap x \neq 0$
15	$\frac{4}{2^x - 1} + \frac{3}{2^x + 1} > 5$	$0 < x < 1$
16	$\frac{1 + e^{-x+2}}{2e^{x+3} - 5} \geq 0$	$x > -3 + \ln \frac{5}{2}$
17	$\frac{4^x + 10 \cdot 2^{x-1} + 6}{6^x - 3^{2x}} > 0$	$x < 0$
18	$\frac{7^x - 7^{1-x} - 6}{3^x - 7^x} < 0$	$x < 0 \cup x > 1$
19	$\frac{3 \cdot 3^x + 9 \cdot 3^{-x} - 4}{3^x} < \frac{8}{3}$	$1 < x < 2$
20	$\frac{5}{e^x} - e^x < 3e^{-x}$	$x > \frac{1}{2} \ln 2$
21	$\frac{(5^x - 1) \left[4 - \left(\frac{1}{2} \right)^x \right]}{5^x - 25} \leq 0$	$x \leq -2 \cup 0 \leq x < 2$
22	$\frac{49^x - 7^x}{49^x + 7^x} \geq 0$	$x \geq 0$
23	$\frac{1}{3^x - 9} > \frac{1}{3^x + 1}$	$x > 2$
24	$\frac{1}{4^x} > \frac{1}{2^x}$	$x < 0$
25	$\frac{7^{x^2-8} - 49^x}{2^{2x^2+2x+4} - 4} \leq 0$	$-2 \leq x \leq 4$
26	$\frac{e^{2x} - 4e^x + 3}{e^{4x} + 4} \leq 0$	$0 \leq x \leq \ln 3$

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27	$\frac{2}{2^x - 2} + \frac{9}{2^x - 1} < \frac{8}{2^x - 2}$	$x < 0 \cup 1 < x < 2$
28	$\frac{3 \cdot 2^x}{2^x - 2} + \frac{2^2}{2^x + 2} < \frac{2^3 - 3 \cdot 2^{2x}}{(2 - 2^x)(2 + 2^x)}$	$x < 1$
29	$\frac{3^{2x+1} - 10 \cdot 3^x + 3}{\left[\left(\frac{2}{3}\right)^x - 1\right](5 - x^2)} \geq 0$	$-\sqrt{5} < x \leq -1 \cup 0 < x \leq 1 \cup x > \sqrt{5}$
30	$2^x + 7 \cdot 4^x - 8^x \geq \frac{3 \cdot 4^{x+1} - 12}{2^x} + 7$	$x \leq 0 \cup \log_2 3 \leq x \leq 2$
31	$\frac{2^x - 3 \cdot 2^x - 2^{2x} - 4^x}{3^{-x}(2^x - 4^x)} < 0$	$x < 0$
32	$\frac{11^{x+1} - 11^x + 3 \cdot 2^x + 2^x}{6^{2x} - 6^{x+1} + 8} \leq 0$	$\log_6 2 < x < \log_6 4$
33	$\frac{e^x - \left(\frac{1}{e^x}\right)}{e^x + \left(\frac{1}{e^x}\right)} > \frac{1}{2}$	$x > \frac{1}{2} \ln 3$
34	$\frac{3^{-x} - 3^{x+1}}{3^{x-1} \cdot (3^{x+1}) - 9} \geq 0$	$-\frac{1}{2} \leq x < 1$
35	$\frac{32}{2^x} + 2^x < 12$	$2 < x < 3$
36	$\frac{2^{2x} - 2}{2^{2x} + 6} - \frac{18}{2^{2x} - 2} \leq 0$	$\frac{1}{2} < x \leq \log_4 26$
37	$\frac{e^x \cdot \left(\frac{1}{e}\right)^{-1} - e^x}{e^{5x} - 1} \leq 0$	$x < 0$
38	$\frac{2^{\sqrt{x^2-4}}}{4^x - 4^x + 1} > 0$	$x \leq -2 \cup x \geq 2$
39	$\frac{\left(\frac{3}{2}\right)^{1-x} - 1}{\sqrt{2} - (2^{x-1})^{\frac{1}{3}}} < 0$	$1 < x < \frac{5}{2}$
40	$\frac{(3^x - 1)^{\frac{1}{2}} - 2\sqrt{2}}{3^{x^2} \cdot \left(\frac{1}{\sqrt[3]{3}}\right) - 9} \geq 0$	$0 \leq x < \sqrt{\frac{7}{3}} \cup x \geq 2$

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41	$\frac{8^x + 3 \cdot 2^{x+2} - 3 \cdot 2^{2x+1} - 8}{\sqrt{2^{2x} + \frac{1}{3^x} + 10}} \geq 0$	$x \geq 1$
42	$\frac{30\left(\frac{2}{3}\right)^{\frac{x}{2}} - 27\left(\frac{2}{3}\right)^x - 8}{9\left(\frac{2}{3}\right)^x + 4\left(\frac{2}{3}\right)^{-x} + 2} \geq 0$	$2 \leq x \leq 4$
43	$\frac{2e^{3x} - 9e^{2x} + e^x + 12}{(e^{\sqrt{2x+3}} - e^x)(e^{2x} - e^x - 2)} \leq 0$	$-\frac{3}{2} \leq x \leq \ln\frac{3}{2} \cup \ln 2 < x \leq \ln 4$
44	$\frac{(2^x - 8)(2^{2x} - 3 \cdot 2^{x+1} + 8)}{2^x - \sqrt{3 \cdot 2^x - 3} - 1} \leq 0$	$1 \leq x \leq 3 \cap x \neq 2$
45	$\frac{\frac{2x}{2}\sqrt{ 2^{2x} - 12 } - \sqrt[2]{2}}{5^{x+2} + 25^{x+1} - 6 \cdot 5^3} \geq 0$	$x \neq 1$
46	$\frac{9^x - 3^{ x }}{4^x - 3 \cdot 2^x + 2} \geq 0$	$x > 1$
47	$\frac{2^x - 2}{\sqrt[3]{3 \cdot (36^x - 6^x) - 6}} < 0$	$\frac{\ln 2}{\ln 6} < x < 1$
48	$\frac{8 \cdot 6^{\frac{3x-1}{x}} - 2^{x+5} \cdot 3^{x+2}}{ 3^{2x} - 3^x - 2} \geq 0$	$0 < x < \log_3 2$
49	$\frac{e^{\sqrt{1-x}} - e^2 \cdot e^{-2x}}{\left(\frac{1}{10}\right)^{x^2-3} - 10^{2x}} \leq 0$	$-3 < x \leq \frac{3}{4}$
50	$\frac{e^x - e^{-x}}{e^x + e^{-x}} > \frac{1}{2}$	$x > \frac{1}{2} \ln 3$
51	$\frac{e^{2x} - e^x}{2e^{2x} - 5e^x + 2} > 0$	$-\ln 2 < x < 0; x > \ln 2$
52	$\frac{3^{x+1} + 3^{2-x} - 4}{3^x} < \frac{8}{3}$	$1 < x < 2$
53	$\frac{6}{2^x - 1} + \frac{3}{2^x + 1} > \frac{2}{2^x - 1}$	$x > 0$
54	$\frac{2^{2x} - 2^x}{3^x - 3} > 0$	$x < 0; x > 1$