

1. $3^x = 7$ $\rightarrow \underline{x \approx 1,7712}$
2. $4 \cdot (5^x - 20) = 1$ $\rightarrow \underline{x \approx 1,8691}$
3. $0,5 \cdot 3,2^x - 1 = 0$ $\rightarrow \underline{x \approx 0,5959}$
4. $13^{x-2} = 72526$ $\rightarrow \underline{x \approx 6,3633}$
5. $7 - 3 \cdot 2^{x-5} = 0$ $\rightarrow \underline{x \approx 6,2224}$
6. $4 \cdot 3^{3x-2} + 7 = 0$ $\rightarrow \underline{L = \emptyset}$
7. $5^{2x} + 2 = 3 \cdot 5^x$
 Substitution: $5^x = z$ $\rightarrow \underline{x_1 = 0} \quad \underline{x_2 \approx 0,4307}$
8. $a^{2x} - 5 \cdot a^x + 6 = 0; a > 0$
 Substitution: $a^x = z$ $\rightarrow \underline{x_1 = \frac{\ln 3}{\ln a}} \quad \underline{x_2 = \frac{\ln 2}{\ln a}}$
9. $3^{x+1} + 3^x = 108$
 Ausklammern von 3^x $\rightarrow \underline{x = 3}$
10. $7^x = 7^{x-1} + 6$
 Ausklammern von 7^x $\rightarrow \underline{x = 1}$
11. $2^{x+1} + 3^x = 2^x + 3^{x+2}$ $\rightarrow \underline{x \approx -5,1285}$
12. $9^{2x+1} + 5^{x-4} = 9^{2x-1} + 5^{x+4}$ $\rightarrow \underline{x \approx 1,5271}$