

1. RESOLVER LAS SIGUIENTES ECUACIONES EXPONENCIALES:

1. $3^x = 48$ (Soluc: $x \approx 3,5237$)
2. $2^x = \frac{8}{27}$ (Soluc: $x \approx -1,7549$)
3. $2^{x+1} + 4 = 80$ (Soluc: $x \approx 5,2479$)
4. $2 \cdot 3^x - 3^{2x} + 3 = 0$ (Soluc: $x=1$)
5. $3^{x-1} + 3^{x+1} - 3^x = 63$ (Soluc: $x=3$)
6. $2^{2x-3} = 8^{x+1}$ (Soluc: $x=-6$)
7. $3^{x+2} + 9^{x+1} = 810$ (Soluc: $x=2$)
8. $2^{x-3} = -3$ (Soluc: \nexists soluc.)
9. $5^{x-1} = 2 + \frac{3}{5^{x-2}}$ (Soluc: $x=2$)
10. $2 \cdot e^{x-4} = 3$ (Soluc: $x \approx 4,4055$)
11. $2 + e^{x-4} = 3$ (Soluc: $x=4$)
12. $100 \cdot 10^x = \sqrt{1000^5}$ (Soluc: $x=3$)
13. $3^{x/2} = 768$ (Soluc: $x \approx 12,0949$)
14. $4^{x^2+2} = 2^{-2}$ (Soluc: \nexists soluc.)
15. $3^{2x+5} = 3^7$ (Soluc: $x=1$)
16. $\frac{1}{e^x} = 27$ (Soluc: $x \approx -3,2958$)
17. $5^{x^2-5x+6} = 1$ (Soluc: $x_1=2, x_2=3$)
18. $3^x \cdot (3^2)^x = 9^3$ (Soluc: $x=2$)

19. $e^{2x} - 2e^{x+1} + e^2 = 0$ (Soluc: $x=1$)
20. $2^x - 10 \cdot 2^x + 16 = 0$ (Soluc: $x \approx 0,8301$)
21. $2^{x+2} + 2^{x+3} + 2^{x+4} + 2^{x+5} + 2^{x+6} = 31$ (Soluc: $x=-2$)
22. $e^{4x} - 5e^{3x} + 5e^{2x} + 5e^x - 6 = 0$ (Soluc: $x_1=0, x_2=\ln 2, x_3=\ln 3$)
23. $2^{x+1} = 4^{2x-4}$ (Soluc: $x=3$)
24. $e^{x-1} = 0$ (Soluc: \nexists soluc.)
25. $x^2 e^x - 5x e^x + 6e^x = 0$ (Sol: $x_1=2, x_2=3$)
26. $3^{2x} \cdot 2^{3x-1} = 6^{x+1}$ (Soluc: $x=1$)
27. $e^{4x-x^2} = e^3$ (Sol: $x_1=1, x_2=3$)
28. $2^{x-3} = 3^{x+1}$ (Soluc: $x \approx -7,8380$)
29. $2^{2x} - 3 \cdot 2^{x+1} + 8 = 0$ (Soluc: $x_1=1, x_2=2$)
30. $3^{2x-4} = 729$ (Soluc: $x=5$)
31. $e^{x-9} = \sqrt{73}$ (Soluc: $x \approx 11,1452$)
32. $2^{x+9} = 3^x$ (Soluc: $x \approx 15,38$)
33. $2^{1-x^2} = \frac{1}{8}$ (Soluc: $x = \pm 2$)
34. $10^{3-x} = 1$ (Soluc: $x=3$)
35. $3^x + 3^{1-x} = 4$ (Soluc: $x_1=0, x_2=1$)
36. (*) $e^{x+2} + e^{x-1} = e^{2x} + e$ (Soluc: $x_1=-1, x_2=2$)
37. $2^{x/2} = 768$
38. $\sqrt{x} = a^x$ (Soluc: $x=1$)

39. $e^{2x} - 2e^x + 2 = 0$ (Soluc: \nexists soluc.)
40. $4^x - 14 \cdot 2^{x-1} + 12 = 0$ (Sol: $x=2, x=\log_2 3$)
41. $2^{x-1} \cdot 3^{1-x} = 5^{2x-2}$ (Soluc: $x=1$)
42. $2^{2x} = 4^{x^2}$ (Soluc: $x_1=0, x_2=1$)
43. $2^{x+1} \cdot 3^{x-1} = 4^x$ (Soluc: $x=1$)
44. $2^{x+1} = 3^{x-1} \cdot 4^x$ (Soluc: $x=1$)
45. $9^x + 2 \cdot 3^{x+1} = 27$ (Soluc: $x=1$)
46. $4^x - 2 \cdot 2^{x-1} = 6$ (Soluc: $x \approx 1,5850$)

47. $11 \cdot 3^x - 9^x = 18$ (Soluc: $x=2, x=\log_3 2$)
48. $x^{x^2+1} = 0$ (Soluc: $x=0$)
49. $x^{x^2+1} = 1$ (Soluc: \nexists soluc.)
50. $3^{x-1} = \left(\frac{1}{3}\right)^{-2x-1}$ (Soluc: $x=-2$)
51. $2^{2x-1} - 16 = 2^{x+1}$ (Soluc: $x=3$)
52. $e^{2x} = e^x + 6$ (Soluc: $x=\ln 3$)