

Esercitazione sulle equazioni esponenziali

1. $2^x \cdot 2^{\sqrt{3x+1}} = 8$ $S = \{1\}$
2. $3^{x+3} + 3^{-x} - 12 = 0$ $S = \{-2; -1\}$
3. $3^x + 3^{x+2} = 5^{x+1} + 25 \cdot 5^{x-1}$ $S = \{0\}$
4. $\frac{3^{1-x} \cdot 9^{x+2}}{27^x} = \frac{1}{3}$ $S = \{3\}$
5. ${}^{x-1}\sqrt{125} \cdot {}^{x+2}\sqrt{5^8} = {}^{x-1}\sqrt{25} \cdot {}^{2x-1}\sqrt{5^9}$ $S = \left\{\frac{4}{3}; 2\right\}$
6. $6^{1-x} + 6^{2-x} = 36^{\frac{x+\frac{1}{2}}{2}} + 36^{x+1}$ $S = \{0\}$
7. $25^x \cdot 0,2 = 5^{x^2+1}$ $S = \emptyset$
8. $4^{\frac{x-2}{x+1}} \cdot 16 = 4^{\frac{2x+3}{x+1}}$ $S = \{3\}$
9. $5\left(\frac{9}{25}\right)^x - 2\left(\frac{3}{5}\right)^x - \frac{3}{5} = 0$ $S = \{1\}$
10. $\frac{1}{4^{1-3x}} + 2^{1+3x} = \frac{1}{4^{2-3x}} + 2^{3+3x}$ $S = \left\{\frac{5}{3}\right\}$
11. $\frac{3^{x^2-x}}{2^x} = \frac{2^{x^2-x-1}}{3^{x-1}}$ $S = \{-1; 1\}$
12. $\frac{\sqrt[3]{8}}{{}^{x-1}\sqrt{4}} = 5^{\frac{x^2-9}{2(1-x)}}$ $S = \{-2; -1; 3\}$