

Exponential equations

№1. Solve the following equations:

$$1. \quad 3^{x+2} + 3^x = 30; \quad 2. \quad 4^{x+1} + 4^{x-2} = 260; \quad 3. \quad 2^{x+4} - 2^x = 120.$$

№2. Solve the following equations:

$$1. \quad 2^{2x} - 6 \cdot 2^x + 8 = 0; \quad 2. \quad 9^x - 6 \cdot 3^x - 27 = 0.$$

№3. Solve the equation: $7^x - 5^{x+2} = 2 \cdot 7^{x-1} - 118 \cdot 5^{x-1}$.

№4. Solve the following equations:

$$1. \quad 3 \cdot 2^{2x} - 5 \cdot 6^x + 2 \cdot 3^{2x} = 0; \quad 2. \quad 2^{2x+1} - 7 \cdot 10^x + 25^{x+0.5} = 0.$$