

Exponential equations

Homework

№1. Solve the following equations:

$$1. \quad 7^{x+1} + 4 \cdot 7^x = 77; \quad 2. \quad 5^x + 7 \cdot 5^{x-2} = 160; \quad 3. \quad 6^{x+1} - 4 \cdot 6^{x-1} = 192.$$

№2. Solve the following equations:

$$1. \quad 25^x - 5^x - 20 = 0; \quad 2. \quad 100 \cdot 0.3^{2x} + 91 \cdot 0.3^x - 9 = 0.$$

№3. Solve the following equations:

$$1. \quad 2^x + 2^{x-1} + 2^{x-2} = 3^x - 3^{x-1} + 3^{x-2}; \quad 2. \quad 3^{x^2+2} - 5^{x^2-1} = 5^{x^2+1} + 3^{x^2-1}.$$

№4. Solve the following equations:

$$1. \quad 7 \cdot 49^x + 3 \cdot 28^x + 4 \cdot 16^x = 0; \quad 2. \quad 9^x + 4^x = 2 \cdot 6^x.$$