

Exponential inequalities

№1. Solve the following inequalities:

1. $7^{x+2} - 14 \cdot 7^x > 5;$

3. $0.5^x + 0.5^{x-1} + 0.5^{x-2} > 56;$

2. $9 \cdot 3^{x-1} + 3^x < 36;$

4. $\left(\frac{1}{5}\right)^{x-1} + \left(\frac{1}{5}\right)^{x+1} \geq 26.$

№2. Solve the following inequalities:

1. $3^{2x} - 4 \cdot 3^x - 45 > 0;$

3. $0.25^x - 12 \cdot 05^x + 32 \geq 0.$

2. $4^x + 2^{x+3} - 20 < 0;$

№3. Solve the following inequalities:

1. $\frac{5^x - 125}{x^2 - 4x + 4} \leq 0;$

2. $\frac{2^x - 1}{x - 1} > 0.$

№4. Solve the following inequalities:

1. $2^{3x+1} + 0.25^{\frac{1-3x}{2}} - 4^{\frac{3x}{2}} > 192;$

2. $2^{2x-1} + 2^{2x-3} - 2^{2x-5} > 2^{7-x} + 2^{5-x} - 2^{3-x}.$

№5. Solve the following inequalities:

1. $3^x - 9 \cdot 3^{-x} - 8 > 0;$

2. $6^{x+2} - 6^{-x} - 37 \geq 0.$

№6. Solve the following inequalities:

1. $3 \cdot 4^x + 2 \cdot 9^x - 5 \cdot 6^x < 0;$

2. $5 \cdot 25^{\frac{1}{x}} + 3 \cdot 10^{\frac{1}{x}} \geq 2 \cdot 4^{\frac{1}{x}}.$