Вариант 1

- $16^{\frac{x-1}{x}} \cdot 5^x = 100$
- $\log_{0,4}(2x-3) = \log_{0,4}(x+5)$
- $2\log_4(4-x) = 4 - \log_2(-x-2)$
- $6^{\log_6^2 x} + x^{\log_6 x} = 12$
- $\dfrac{20-4|x|}{|x^2+11x+21|-3} \leq 1$
- $\dfrac{|x-1|+10}{4|x-1|+3} > 2$
- $\dfrac{4^x - 2^{x+4} + 30}{2^x - 2} + \dfrac{4^x - 7\cdot 2^x + 3}{2^x - 7} \leq 2^{x+1} - 14$
- $3^{x+1} < \dfrac{9^{4x^2}}{\sqrt{27}}$
- $4^x - 2^{x+1} - 8 = 0$
- $\sqrt{x^2-16} \cdot \sqrt{2x-1} \leq x^2 - 16$
- $\dfrac{\sqrt{2-x}}{3-2x} < 1$
- $\dfrac{4x+15-4x^2}{\sqrt{4x+15}+2x} \geq 0$

Вариант 2

- $2\lg\lg x = \lg(3-2\lg x)$
- $\log_{25} x + \log_5 x = \log_{\frac{1}{5}} \sqrt{8}$
- $\log_2 x \cdot \log_2(x+3) + 1 = \log_2(x^2-3x)$
- $\lg\lg x + \lg(\lg x^3 - 2) = 0$
- $3|x+2| - 4|x+1| \ \geq 2$
- $\dfrac{3|x|-11}{x-3} > \dfrac{3x+14}{6-x}$
- $\dfrac{1}{3^x+5} < \dfrac{1}{3^{x+1}-1}$
- $\dfrac{1}{2^x-2} \geq \dfrac{1}{4-2^{x-1}}$

- $8^x - 4 \cdot 4^x - 3 \cdot 2^{x+1} + 9 = 0$
- $\sqrt{24 - 10x + x^2} > x - 4$
- $\sqrt{10x - 1} + 1 \leq 5x$
- $\sqrt{6x - x^2 - 8} - \sqrt{7 - 2x} \geq \sqrt{8x - x^2 - 15}$

Вариант 3

- $\log_4 \dfrac{1}{x^2} + \log_4 \sqrt{x} = -3$
- $\log_3^2 x - \log_3 x = 2$
- $\lg(5 - x) - \dfrac{1}{3} \lg(35 - x^3) = 0$
- $\dfrac{2}{\lg x - 3} + \dfrac{4}{\lg x + 1} = 1$
- $|x^3 - 2x^2 + 2| \geq 2 - 3x$
- $x^2 - 4x + 8 - 5|x - 2| \leq 0$
- $2^x + 3 \cdot 2^{2-x} < 7$
- $\left(\dfrac{1}{4}\right)^x - 3 \cdot \left(\dfrac{1}{2}\right)^x + 2 > 0$
- $8^{x+2} = 32^{1-x}$
- $\sqrt{2 - x} - \sqrt{4 + x} \leq \sqrt{x + 3}$
- $2x^2 + \sqrt{2x^3} > x$
- $\dfrac{\sqrt{9 + 4x - x^2}}{3 - x} < 1$

Вариант 4

- $\lg^2(x + 1) = \lg(x + 1) \cdot \lg(x - 1) + 2\lg^2(x - 1)$
- $x(1 - \lg 5) = \lg(2^x + x - 1)$
- $\lg(3x^2 + 12x + 19) - \lg(3x + 4) = 1$
- $(\log_3(3^{-2x} + 1) + x) \cdot (2\log_9(3^{2x} + 1) - x - 2) = 3$
- $\dfrac{1}{|x + 1| - 1} \geq \dfrac{1}{|x + 1| - 2}$
- $\dfrac{5x + 3}{|x + 2|} < 2x$

- $\dfrac{9^x - 3^{x+1} - 19}{3^x - 6} + \dfrac{9^{x+1} - 3^{x+4} + 2}{3^x - 9} \leq 10 \cdot 3^x + 3$
- $9^x - 2^{\frac{2x+1}{2}} < 2^{\frac{2x+7}{2}} - 3^{2x-1}$
- $3^{x+1} + 3^x - 3^{x-2} = 35$
- $\dfrac{\sqrt{2x^3 - 22x^2 + 60x}}{x - 6} \geq 2x - 10$
- $\sqrt{-x^2 + 6x - 5} > 8 - 2x$
- $\sqrt{\dfrac{2 - \frac{13}{9}x}{2 - x}} \leq x - 1$

Вариант 5

- $\log_{5^x}(x^2 + 9x + 15) + \log_{125^x} x^3 = \dfrac{2}{x}$
- $\log_2 x - 8 \log_{x^2} 2 = 3$
- $1 + 2 \log_{x+2} 5 = \log_5(x + 2)$
- $\log_2 \dfrac{x}{4} = \dfrac{15}{\log_2 \frac{x}{8} - 1}$
- $\dfrac{(x^2 + x + 1)^2 - 2|x^3 + x^2 + x| - 3x^2}{10x^2 - 17x - 6} \geq 0$
- $\dfrac{x|x| + 1}{x - 2} + 1 \geq x$
- $\dfrac{4^x + 5}{2^x - 11} \geq -1$
- $4^x < 0.125$
- $3^x = 4^x$
- $\sqrt{\dfrac{x^2 - 22x + 121}{x^2 - 24x + 140}} \geq 50x - 2x^2 - 309$
- $\sqrt{\dfrac{\sqrt{x} - \frac{2}{3}}{x - \frac{23}{27}}} \leq \dfrac{1}{\sqrt{x} - \frac{1}{3}}$
- $\sqrt{x^2 - x - 56} - \sqrt{x^2 - 25x + 136} < 8 \cdot \sqrt{\dfrac{x + 7}{x - 8}}$

Вариант 6

- $\log_2 \dfrac{x-5}{x+5} + \log_2(x^2-25) = 0$
- $\log_3(x^2-6x) = \log_3(5-2x)$
- $\log_{49}(2x^2+x-5) + \log_{\frac{1}{7}}(1+x) = 0$
- $2\lg x^2 - \lg^2(-x) = 4$
- $-1 < |x^2-7| < 29$
- $|2x+3| > 11$
- $0.04^{2x} \geq \left(\sqrt{5}\right)^{x^2+3.75}$
- $4^{2x+1} - 7 \cdot 12^x + 3^{2x+1} < 0$
- $7 \cdot 9^{x^2-3x+1} + 5 \cdot 6^{x^2-3x+1} - 48 \cdot 4^{x^2-3x} = 0$
- $\dfrac{1}{\sqrt{3-x}} > \dfrac{1}{x-2}$
- $(x^2+8x+15) \cdot \sqrt{x+4} \geq 0$
- $\dfrac{\sqrt{2-x}-2}{1-\sqrt{3-x}} \geq 1 + \sqrt{3-x}$

Вариант 7

- $\log_2(4^x+4) = x + \log_2(2^{x+1}-3)$
- $x^{\log_{\sqrt{x}}(x-2)} = 9$
- $\log_{4x+1} 7 + \log_{9x} 7 = 0$
- $\lg(100x)\lg(0,001x) + 4 = 0$
- $\dfrac{3}{|x-1|} \geq 2x+5$
- $||x^2+3x-8| - x^2| \geq 8 - x$
- $\dfrac{2 \cdot 3^{x+3} - 5^{x+3}}{5 \cdot 3^x - 3 \cdot 5^x} < 1$
- $2^x > 16$
- $9^{x+0.5} + \dfrac{3}{9^x} + 26 = 16(3^x + 3^{-x})$
- $\sqrt{x^2+3x+2} - \sqrt{x^2-x+1} < 1$

- $\dfrac{\sqrt{x}-\frac{4}{\sqrt{x}}}{\sqrt{1+\frac{1}{x}-\frac{3}{\sqrt{x}}}} \geq 1$
- $\sqrt{x+1}\cdot(x^2+3x-4) \geq 0$

Вариант 8

- $\log_2(x^2-x-3)-\log_2(x+1)=3$
- $\dfrac{1}{2}\log_2 x^2+\log_2(x-6)=4$
- $\log_{\sqrt{x}} 2+4\log_4 x^2+9=0$
- $\sqrt{\log_x \sqrt{2x}}\cdot\log_4 x=-1$
- $\dfrac{5-4x}{|x-2|} \leq |2-x|$
- $|x+2000|<|x-2001|$
- $15\cdot\dfrac{4^{x-2}}{4^x-3^x}>1+\left(\dfrac{3}{4}\right)^x$
- $4^x-5\cdot 2^{x+1}+16>0$
- $0,5^{3-2x}+3\cdot 0,25^{1-x}=7$
- $\sqrt{4x-8} \geq x-5$
- $\dfrac{x-2}{x\sqrt{10+3x-x^2}}>0$
- $\sqrt{x^2-3x+2} \leq x-1$

Вариант 9

- $2\log_2\log_2 x+\log_{\frac{1}{2}}\log_2(2\sqrt{2}x)=1$
- $\log_2 x=5$
- $\lg x-\sqrt{\lg x}-2=0$
- $\lg^2 x-6\lg\sqrt{x}=\dfrac{2}{3}\lg x^3-4$
- $|x^2-8x+15| \leq |15-x^2|$
- $\left|\dfrac{x}{10}-\dfrac{1}{5}\right| \geq \left|\dfrac{x}{4}-\dfrac{1}{2}\right|$

- $0.7^x < 2\dfrac{2}{49}$
- $\dfrac{31 - 5 \cdot 2^x}{4^x - 24 \cdot 2^x + 128} \geq 0.25$
- $\dfrac{(\sqrt{3})^{2x} + 5 \cdot 3^{2-x} - 14}{49 - 7^x} = 0$
- $\dfrac{\sqrt{x^2 - 5x + 8}}{3 - x} \geq 1$
- $\dfrac{\sqrt{x^6 - 64}}{x - 3} \geq 0$
- $\sqrt{x^2 - 25} \cdot (x - 3) < 0$

Вариант 10

- $\log_5 (x - 8)^2 = 2 + 2 \log_5 (x - 2)$
- $\lg(x + 1,5) = -\lg x$
- $\log_{x+1} (x^2 + x - 6)^2 = 4$
- $(1 - \log_2 x) \cdot \sqrt{\log_{\frac{x}{2}} \sqrt{x}} = 1$
- $\dfrac{|x - 2|}{|x - 1| - 1} \geq 1$
- $\dfrac{x - 2}{|x - 2|} \leq 4 - x^2$
- $5^{2x+1} \leq 5^x + 4$
- $4^{0.5x^2 - 3} \geq 8$
- $\dfrac{1}{8}\sqrt{2^{x-1}} = 4^{-1,25}$
- $\sqrt{x + 8\left(3 - \sqrt{8 + x}\right)} < \dfrac{x + 16}{2\sqrt{8 + x} - 10}$
- $\dfrac{1 - x}{x} > \sqrt{\dfrac{3x - 2}{3x + 4}}$
- $\sqrt{\dfrac{3 - 4x}{5 + 4x}} + \dfrac{\sqrt{5 + 4x}}{2\sqrt{3 - 4x} - 2} \geq 0$