Вариант 1

- $\log_3^2 x - \log_3 x = 2$
- $\lg x - \sqrt{\lg x} - 2 = 0$
- $\dfrac{|x+1| + |x-2|}{x+199} < 1$
- $\dfrac{4x}{|x-2| - 1} \geq 3$
- $5^{2x-6} < 1$
- $4^{0.5x^2-3} \geq 8$
- $9^{x+0.5} + \dfrac{3}{9^x} + 26 = 16(3^x + 3^{-x})$
- $3^{-x} + 3^{x+3} = 12$

Вариант 2

- $9^{\log_3(1-2x)} = 5x^2 - 5$
- $2^{\log_3 x^2} \cdot 5^{\log_3 x} = 400$
- $|2x+8| \geq 8 - |1-x|$
- $(|x| - 1)(2x^2 + x - 1) \leq 0$
- $\dfrac{2^{1-x} - 2^x + 1}{2^x - 1} \leq 0$
- $\dfrac{2}{3^x - 9} \geq \dfrac{8}{3^x - 3}$
- $25 \cdot 0,2^{x+0,5} = \sqrt{5} \cdot 0,04^x$
- $4^x = 2 \cdot 14^x + 3 \cdot 49^x$

Вариант 3

- $\sqrt{\log_x \sqrt{2x}} \cdot \log_2 x = -1$
- $(1 - \log_2 x) \cdot \sqrt{\log_{\frac{x}{2}} \sqrt{x}} = 1$
- $|x^3 - 2x^2 + 2| \geq 2 - 3x$
- $\dfrac{x|x| + 1}{x-2} + 1 \geq x$

- $0.2^{\frac{2x-3}{x-2}} \geq 5$
- $\dfrac{2^{2x+1} - 96 \cdot 0.5^{2x+3} + 2}{x+1} \leq 0$
- $27^x - 13 \cdot 9^x + 13 \cdot 3^{x+1} - 27 = 0$
- $9^x - 6 \cdot 3^x - 27 = 0$

Вариант 4

- $\lg(x-9) + \lg(2x-1) = 2$
- $\log_{16} x = -\dfrac{3}{4}$
- $\dfrac{|x-4| - |x-1|}{|x-3| - |x-2|} < \dfrac{|x-3| + |x-2|}{|x-4|}$
- $x^2 + 2|x| < 8$
- $\dfrac{27^{x+\frac{1}{3}} - 10 \cdot 9^x + 10 \cdot 3^x - 5}{9^{x+\frac{1}{2}} - 10 \cdot 3^x + 3} \leq 3^x + \dfrac{1}{3^x - 2} + \dfrac{1}{3^{x+1} - 1}$
- $\dfrac{15^x - 3^{x+1} - 5^{x+1} + 15}{-x^2 + 2x} \geq 0$
- $3^{2x} - 5^x = 15 \cdot 9^x - 15 \cdot 5^x$
- $\sqrt{3^{x^2}} = \left(3^{\sqrt[4]{x}}\right)^4$

Вариант 5

- $2\log_8 2x + \log_8(x^2 - 2x + 1) = \dfrac{4}{3}$
- $\log_2 x + \log_4 x + \log_8 x = 11$
- $\dfrac{x-2}{|x+2|} + \dfrac{2x+5}{x+2} \leq 0$
- $\dfrac{|x-2|}{|x-1| - 1} \geq 1$
- $15 \cdot \dfrac{4^{x-2}}{4^x - 3^x} > 1 + \left(\dfrac{3}{4}\right)^x$
- $\left(\dfrac{1}{9}\right)^x - 6 \cdot \left(\dfrac{1}{3}\right)^x - 27 \leq 0$
- $0.1^{x+1} + 0.01^x = 0.02$

- $4^x - 0,25^{x-2} = 15$

Вариант 6

- $\log_8 x = \dfrac{2}{3}$
- $\log_x 9 + \log_{x^2} 729 = 10$
- $\dfrac{3|x| - 11}{x - 3} > \dfrac{3x + 14}{6 - x}$
- $|3x + 1| + 2 + \dfrac{3}{|3x + 1| - 2} \leq \dfrac{1}{|3x + 1| + 2}$
- $0.1^{\frac{2x+1}{1-x}} > 1000$
- $2^x > 16$
- $0,2^{x-1} - 0,2^{x+1} = 4,8$
- $\left(\dfrac{2}{3}\right)^x \cdot \left(\dfrac{9}{8}\right)^x = \dfrac{64}{27}$

Вариант 7

- $2 \lg \lg x = \lg(3 - 2 \lg x)$
- $\log^2_{\frac{1}{2}} 4x + \log_2 \dfrac{x}{8} = 7$
- $x^2 - 4x + 8 - 5|x - 2| \leq 0$
- $|x + 3| - |x^2 + x - 2| \geq 1$
- $\dfrac{35^{|x|} - 5^{|x|} - 5 \cdot 7^{|x|} + 5}{2^{\sqrt{x+2}} + 1} \geq 0$
- $0.04^{2x} \geq \left(\sqrt{5}\right)^{x^2+3.75}$
- $2(4^x + 4^{-x}) + 14 = 9(2^x + 2^{-x})$
- $12 \cdot \left(3^{4x^2+2x-1} - 1\right)^2 - \left(3^{2(x-1)+4x^2} + \dfrac{1}{3}\right) \cdot \left(3^{4x^2+2x+1} - 3\right) = 16$