

Вариант 1

1	$49z^2 \leq 25$
2	$4x - 10x^2 < 0$
3	$(4-x)(2-x) \leq 0$
4	$x^2 - 5x - 24 \leq 0$
5	$0,8x^2 \leq \frac{10x+3}{10}$
6	$x^2 > 11x - 28$
7	$(x+1)(x+3)^2(2x-3) \leq 0$
8	$\frac{1}{x} < 2$
9	$\frac{x-2}{x+3} > 5$
10	$1 < \frac{1-3x}{2x-1} \leq 2$
11	$x-1 > \frac{4x}{3-x}$
12	$\begin{cases} x^2 - 6x - 27 > 0 \\ 4x^2 + 31x + 60 \leq 0 \end{cases}$
13	$x(x-2)(x+3) \geq 0$
14	$\frac{5x^2 - x}{9x^2 - 6x + 1} > 0$
15	$\frac{3x}{x+2} \leq 3-x $

Вариант 2

1	$128 - 2y^2 \geq 0$
2	$12x^2 - 8x < 0$
3	$(x-30)(12-x) \leq 0$
4	$y^2 < 20 - y$
5	$x^2 - 3 < \frac{(3-x)(3+x)}{3}$
6	$x^2 - 6x + 5 < 0$
7	$\frac{(x^2-1)(4-x^2)}{x^2-9} < 0$
8	$\frac{u+7}{u+6} > 1$
9	$\frac{x-4}{x+8} > 2$
10	$-1 < \frac{2-x}{4x-3} < 2$
11	$\frac{2(x-4)}{(x-1)(x-7)} > \frac{1}{x-2}$
12	$\begin{cases} 9x^2 - 4x - 5 < 0 \\ \frac{5x-2}{3-2x} \leq 1 \end{cases}$
13	$\frac{x-1}{x} - \frac{x-1}{x-2} < 2$
14	$x(x-2)(x+3) \geq 0$
15	$\left \frac{x^2 - 3x - 1}{x^2 + x + 1} \right < 3$

Вариант 3

1	$3x^2 \leq 75$
2	$3x > 2x^2$
3	$(x-3)(x-8) \geq 0$
4	$x^2 - 6x + 5 < 0$
5	$\frac{x^2 - 4x}{3} > 6x$
6	$t^2 + 10t + 30 < 0$
7	$\frac{(x^2-4x)(3x+5)^2}{x^2-4} \leq 0$
8	$\frac{x-1}{x+1} > 2$
9	$\frac{2x+1}{2+x} \geq 2$
10	$1 < \frac{15-7x}{3x-3} < 2$
11	$\frac{5x^2 - x}{9x^2 - 6x + 1} > 0$
12	$\begin{cases} x \leq 3 - \frac{1-3x}{x-4} \\ (x-1)^2 \leq 16 \end{cases}$
13	$1 + \frac{2}{x-1} > \frac{6}{x}$
14	$\frac{9-x^2}{x-2} \leq 0$
15	$\left \frac{x^2 + 2x + 4}{x^2 - x - 2} \right \leq 1$

Вариант 4

1	$9x^2 < 4$
2	$5x^2 > 60x$
3	$(x-8)(3-x) > 0$
4	$15y^2 + 20y \leq 75$
5	$\frac{4-x^2}{3} > (2+x)^2$
6	$x^2 - 6x + 5 < 0$
7	$(4-3x)(x-2)(x+3)(9-x^2) \leq 0$
8	$\frac{2x+1}{x-2} < 2$
9	$\frac{x-4}{x+8} > 2$
10	$1 < \frac{2-3x}{5x-3} < 2$
11	$\frac{2x+3}{x^2+x-12} < \frac{1}{2}$
12	$\begin{cases} 3x^2 - 7x + 4 < 0 \\ x^2 - 4 \leq 0 \end{cases}$
13	$\frac{x^2-9}{x^2-2x+1} > 0$
14	$\frac{x-3}{x^2-5} > 0$
15	$\left \frac{x^2 - 5x + 4}{x^2 - 4} \right \leq 1$

Вариант 5

1	$25x^2 - 16 > 0$
2	$-8x^2 < 12x$
3	$(x-1)(6-x) < 0$
4	$2u^2 - 3u - 5 > 0$
5	$\frac{(x-3)^2}{3} < 39 - x^2$
6	$x^2 - 5x - 24 \leq 0$
7	$\frac{(x^2 - 3x)(5x+7)^2}{x^2 - 9} \geq 0$
8	$\frac{t+1}{t-2} > 11$
9	$\frac{x-4}{x+8} > 2$
10	$1 < \frac{12-x}{2x-3} < 2$
11	$\frac{9-x^2}{x-2} \leq 0$
12	$\begin{cases} \frac{x^2-7}{2x-52} > 1 \\ \frac{3x-2}{5} - \frac{6-x}{2} \geq 2x-7 \end{cases}$
13	$(2x-3)(x+4)(2-x) > 0$
14	$2x \geq \frac{3}{x+4}$
15	$\frac{x^2 - x - 12}{x-3} \geq 2x$

Вариант 6

1	$63 > 7x^2$
2	$-4x^2 + 3x \leq 0$
3	$(x-13)(20-x) \leq 0$
4	$x^2 - 3x - 6 > 0$
5	$\frac{2x^2+x}{2} > \frac{x}{3} + \frac{1}{6}$
6	$x^2 + 9x + 18 \geq 0$
7	$(x-1)^2(x+2)^3x > 0$
8	$\frac{2x+1}{2+x} \geq 2$
9	$\frac{x-1}{x+1} > 2$
10	$1 \leq \frac{2x-3}{x+1} < 2$
11	$(x+2)(2-x)^2 < 0$
12	$\begin{cases} 4x^2 + 7x - 15 \leq 0 \\ 20x^2 - 23x - 21 < 0 \end{cases}$
13	$\frac{x^2 - 7x - 1}{2x - 7x^2 - 8} \leq 0$
14	$\frac{2(x-4)}{(x-1)(x-7)} > \frac{1}{x-2}$
15	$\left \frac{x^2 - 3x - 1}{x^2 + x + 1} \right \geq 3$

Вариант 7

1	$x^2 > 9$
2	$5x - 60x^2 \geq 0$
3	$(x-6)(12-x) \leq 0$
4	$x^2 + 9x + 18 \geq 0$
5	$\frac{2x^2+x}{2} < \frac{5x}{3} + \frac{5}{6}$
6	$y^2 < 20-y$
7	$(x^3-1)(x^4-16) < 0$
8	$\frac{x-4}{x+8} > 2$
9	$\frac{t+1}{t-2} > 11$
10	$0 < \frac{4x+3}{2-0,5x} < 2$
11	$\frac{2x+3}{x^2+x-12} \leq \frac{1}{2}$
12	$\begin{cases} \frac{3x-2}{2} - \frac{x}{2} \geq \frac{2-x}{6} \\ x \geq 1 - \frac{1-3x^2}{x-4} \end{cases}$
13	$(x^2 - 10x + 25)(2x-4) \leq 0$
14	$\frac{9x^2 - 6x + 1}{(x+3)^3} \leq 0$
15	$\frac{ x-3 }{x^2 - 5x + 6} \geq 2$

Вариант 8

1	$72x^2 - 32 > 0$
2	$3x^2 + 2x \leq 0$
3	$(17-x)(5-x) < 0$
4	$z^2 + 6z + 8 \leq 0$
5	$\frac{(x+2)(2-x)+8}{3} \leq x^2$
6	$y^2 < 20-y$
7	$x(x+4)(x^2-5)(x^3-2)^2 < 0$
8	$\frac{z+2}{z-6} \geq 9$
9	$\frac{x-4}{x+8} > 2$
10	$1 < \frac{2-3x}{x-3} \leq 2$
11	$2 + \frac{3}{x+1} > \frac{2}{x}$
12	$\begin{cases} x^2 - 3x + 2 \geq 0 \\ (2x-3)^2 < 1 \end{cases}$
13	$\frac{2x-7}{9-x^2} \leq 0$
14	$x-1 > \frac{4x}{3-x}$
15	$\left \frac{x^2 + 2x + 4}{x^2 - x - 2} \right > 1$

Вариант 9

1	$12x^2 - 48 > 0$
2	$4x \leq 12x^2$
3	$(x-2)(x-9) \geq 0$
4	$x^2 + 12x + 36 \leq 0$
5	$\frac{2x^2 + x}{2} < \frac{3x}{5} + \frac{3}{10}$
6	$15y^2 + 20y \leq 75$
7	$(x^2 - 3)(x^3 - 2) < 0$
8	$\frac{x-16}{x+2} \leq 7$
9	$\frac{z+2}{z-6} \geq 9$
10	$1 < \frac{3+2x}{x-1} < 3$
11	$\frac{3}{x-2} - \frac{2x}{x+4} \geq 3$
12	$\begin{cases} \frac{x+7}{x-5} + \frac{3x+1}{2} \geq 0 \\ (5-x)^2 \leq 4 \end{cases}$
13	$\frac{x-3}{x^2 - 5} > 0$
14	$x + \frac{x}{x-3} \geq 5$
15	$\left \frac{x^2 - 5x + 4}{x^2 - 4} \right > 1$

Вариант 10

1	$200 - 72t^2 < 0$
2	$-4x^2 \geq 10x$
3	$(17-x)(5-x) < 0$
4	$t^2 + 10t + 30 < 0$
5	$\frac{x(x-1)}{3} < 4$
6	$x^2 - 5x - 24 \leq 0$
7	$\frac{(x^2 - 3x)(5x+7)^2}{x^2 - 9} \geq 0$
8	$\frac{2x+1}{2+x} \geq 2$
9	$\frac{1}{x} < 2$
10	$1 < \frac{1-3x}{2x-1} \leq 2$
11	$\frac{2x^2 + x + 2}{x^2 - 1} \leq 0$
12	$\begin{cases} x^2 - 6x - 27 > 0 \\ 4x^2 + 31x + 60 \leq 0 \end{cases}$
13	$(2x^2 + x - 6)(4-x) > 0$
14	$\frac{9x^2 - 6x + 1}{(x+3)^3} \leq 0$
15	$\frac{ x-3 }{x^2 - 5x + 6} \geq 2$

Вариант 11

1	$3x^2 \leq 75$
2	$x^2 + 3x \leq 0$
3	$(4-x)(2-x) \leq 0$
4	$z^2 + 6z + 8 \leq 0$
5	$\frac{2x^2 + x}{2} > \frac{x}{3} + \frac{1}{6}$
6	$x^2 + 9x + 18 \geq 0$
7	$\frac{x^4 - 3x^3 + 2x^2}{x^2 + x - 30} > 0$
8	$\frac{1}{x} < 2$
9	$\frac{x-4}{x+8} > 2$
10	$1 < \frac{12-x}{2x-3} < 2$
11	$\frac{x^2 - 9}{x^2 - 2x + 1} < 0$
12	$\begin{cases} \frac{x^2 - 7}{2x - 52} > 1 \\ \frac{3x-2}{5} - \frac{6-x}{2} \geq 2x-7 \end{cases}$
13	$\frac{9x^2 - 6x + 1}{(x+3)^3} \leq 0$
14	$\frac{x^2 - 9}{x^2 - 2x + 1} > 0$
15	$\left \frac{x^2 - 3x - 1}{x^2 + x + 1} \right < 3$

Вариант 12

1	$12x^2 - 48 > 0$
2	$5x^2 > 60x$
3	$(x-2)(x-9) \geq 0$
4	$2u^2 - 3u - 5 > 0$
5	$\frac{x^2 - 4x}{3} > 6x$
6	$y^2 < 20 - y$
7	$\frac{(2x-3)^4 (3x+1)^3 (x^2 + x)^2}{(x^2 + x + 1)(x^2 - 25)} > 0$
8	$\frac{x-16}{x+2} \leq 7$
9	$\frac{1}{x} < 2$
10	$1 < \frac{15-7x}{3x-3} < 2$
11	$x(x-5)(x+6) \geq 0$
12	$\begin{cases} \frac{x+7}{x-5} + \frac{3x+1}{2} \geq 0 \\ (5-x)^2 \leq 4 \end{cases}$
13	$\frac{(x-2)^2}{(x+3)^3} \leq 0$
14	$\frac{9-x^2}{x-2} < 0$
15	$\frac{ x-3 }{x^2 - 5x + 6} \geq 2$

Вариант 13

1	$72x^2 - 32 > 0$
2	$-4x^2 \geq 10x$
3	$(x-1)(6-x) < 0$
4	$x^2 + 12x + 36 \leq 0$
5	$x^2 - 3 < \frac{(3-x)(3+x)}{3}$
6	$z^2 + 6z + 8 \leq 0$
7	$\frac{(x^2-1)(4-x^2)}{x^2-9} < 0$
8	$\frac{x-1}{x+1} > 2$
9	$\frac{2x+1}{x-2} < 2$
10	$-1 < \frac{2-x}{4x-3} < 2$
11	$\frac{3x^2-2x-5}{x-2} > 0$
12	$\begin{cases} 3x^2-7x+4 < 0 \\ x^2-4 \leq 0 \end{cases}$
13	$\frac{1}{x-2} + \frac{1}{x} \leq \frac{2}{x+2}$
14	$\frac{3}{x+2} > \frac{1}{x}$
15	$\left \frac{x^2+2x+4}{x^2-x-2} \right \leq 1$

Вариант 14

1	$63 > 7x^2$
2	$4x-10x^2 < 0$
3	$(4-x)(2-x) \leq 0$
4	$15y^2 + 20y \leq 75$
5	$\frac{(x+2)(2-x)+8}{3} \leq x^2$
6	$x^2 - 6x + 5 < 0$
7	$(x-1)^2(x+2)^3 x > 0$
8	$\frac{u+7}{u+6} > 1$
9	$\frac{2x+1}{x-2} < 2$
10	$1 \leq \frac{2x-3}{x+1} < 2$
11	$(x^2+2x)(x-4) > 0$
12	$\begin{cases} \frac{x^2-7}{2x-52} > 1 \\ \frac{3x-2}{5} - \frac{6-x}{2} \geq 2x-7 \end{cases}$
13	$\frac{3}{x+2} \geq \frac{1}{x}$
14	$(x^2-10x+25)(2x-4) \leq 0$
15	$\frac{x^2- x -12}{x-3} \geq 2x$

Вариант 15

1	$25x^2 - 16 > 0$
2	$-8x^2 < 12x$
3	$(4-x)(2-x) \leq 0$
4	$x^2 - 5x - 24 \leq 0$
5	$\frac{4-x^2}{3} > (2+x)^2$
6	$x^2 > 11x - 28$
7	$\frac{(x^2-3x)(5x+7)^2}{x^2-9} \geq 0$
8	$\frac{x-16}{x+2} \leq 7$
9	$\frac{x-4}{x+8} > 2$
10	$0 < \frac{4x+3}{2-0,5x} < 2$
11	$(x^2-1)(16-9x^2) \geq 0$
12	$\begin{cases} 3x^2-7x+4 < 0 \\ x^2-4 \leq 0 \end{cases}$
13	$(x-1)(x+2)(x-3) < 0$
14	$\frac{5x^2-x}{9x^2-6x+1} > 0$
15	$\left \frac{x^2-3x-1}{x^2+x+1} \right < 3$

Вариант 16

1	$x^2 > 9$
2	$x^2 + 3x \leq 0$
3	$(x-8)(3-x) > 0$
4	$15y^2 + 20y \leq 75$
5	$\frac{2x^2+x}{2} < \frac{5x}{3} + \frac{5}{6}$
6	$2u^2 - 3u - 5 > 0$
7	$(x^2-3x+2)(x^2-x) < 0$
8	$\frac{z+2}{z-6} \geq 9$
9	$\frac{x-2}{x+3} > 5$
10	$-1 < \frac{2-x}{4x-3} < 2$
11	$2x \geq \frac{3}{x+4}$
12	$\begin{cases} 3x^2-7x+4 < 0 \\ x^2-4 \leq 0 \end{cases}$
13	$(2x-3)(x+4)(2-x) > 0$
14	$\frac{3}{x+2} \geq \frac{1}{x}$
15	$\left \frac{x^2-5x+4}{x^2-4} \right > 1$

Вариант 17

1	$128-2y^2 \geq 0$
2	$5x^2 > 60x$
3	$(4-x)(2-x) \leq 0$
4	$2u^2 - 3u - 5 > 0$
5	$\frac{2x^2+x}{2} < \frac{5x}{3} + \frac{5}{6}$
6	$y^2 < 20-y$
7	$(x+3)(x-4)(3x-2)^2 < 0$
8	$\frac{2x+1}{2+x} \geq 2$
9	$\frac{x-1}{x+1} > 2$
10	$1 < \frac{12-x}{2x-3} < 2$
11	$\frac{1}{x-2} + \frac{1}{x} < \frac{2}{x+2}$
12	$\begin{cases} 9x^2 - 4x - 5 < 0 \\ \frac{5x-2}{3-2x} \leq 1 \end{cases}$
13	$\frac{x-1}{x} - \frac{x-1}{x-2} < 2$
14	$\frac{3}{x+2} > \frac{1}{x}$
15	$\left \frac{x^2+2x+4}{x^2-x-2} \right > 1$

Вариант 18

1	$12x^2 - 48 > 0$
2	$5x - 60x^2 \geq 0$
3	$(17-x)(5-x) < 0$
4	$z^2 + 6z + 8 \leq 0$
5	$\frac{2x^2+x}{2} > \frac{x}{3} + \frac{1}{6}$
6	$x^2 > 11x - 28$
7	$x(x-5)^4(x+6) \geq 0$
8	$\frac{2x+1}{x-2} < 2$
9	$\frac{x-2}{x+3} > 5$
10	$-1 < \frac{2-x}{4x-3} < 2$
11	$(x-3)^2(x-7) < 0$
12	$\begin{cases} 4x^2 + 7x - 15 \leq 0 \\ 20x^2 - 23x - 21 < 0 \end{cases}$
13	$\frac{2x-7}{9-x^2} \leq 0$
14	$(x+2)(2-x)^2 < 0$
15	$\left \frac{x^2-3x-1}{x^2+x+1} \right \geq 3$

Вариант 19

1	$9x^2 < 4$
2	$5x - 60x^2 \geq 0$
3	$(x-6)(12-x) \leq 0$
4	$z^2 + 6z + 8 \leq 0$
5	$\frac{2x^2+x}{2} < \frac{3x}{5} + \frac{3}{10}$
6	$x^2 + 9x + 18 \geq 0$
7	$\frac{x(x^2-4)}{(3x-7)(x+2)} \leq 0$
8	$\frac{x-4}{x+8} > 2$
9	$\frac{1}{x} < 2$
10	$1 < \frac{3+2x}{x-1} < 3$
11	$\frac{3}{x+2} > \frac{1}{x}$
12	$\begin{cases} x \leq 3 - \frac{1-3x^2}{x-4} \\ (x-1)^2 \leq 16 \end{cases}$
13	$(x-1)(x+2)(x-3) < 0$
14	$1 + \frac{2}{x-1} > \frac{6}{x}$
15	$\left \frac{x^2+2x+4}{x^2-x-2} \right > 1$

Вариант 20

1	$x^2 > 9$
2	$4x - 10x^2 < 0$
3	$(x-1)(6-x) < 0$
4	$x^2 - 5x - 24 \leq 0$
5	$\frac{2x^2+x}{2} > \frac{x}{3} + \frac{1}{6}$
6	$z^2 + 6z + 8 \leq 0$
7	$\frac{(x^2-1)(4-x^2)}{x^2-9} < 0$
8	$\frac{2x+1}{2+x} \geq 2$
9	$\frac{z+2}{z-6} \geq 9$
10	$1 < \frac{3+2x}{x-1} < 3$
11	$\frac{9-x^2}{x-2} < 0$
12	$\begin{cases} x^2 - 3x + 2 \geq 0 \\ (2x-3)^2 < 1 \end{cases}$
13	$\frac{5x^2-x}{9x^2-6x+1} > 0$
14	$(2x^2+x-6)(4-x) > 0$
15	$\left \frac{x^2-5x+4}{x^2-4} \right \leq 1$

Вариант 21

1	$49z^2 \leq 25$
2	$-4x^2 + 3x \leq 0$
3	$(17-x)(5-x) < 0$
4	$t^2 + 10t + 30 < 0$
5	$\frac{2x^2 + x}{2} > \frac{x}{3} + \frac{1}{6}$
6	$x^2 - 5x - 24 \leq 0$
7	$\frac{(x^2 - 4x)(3x + 5)^2}{x^2 - 4} \leq 0$
8	$\frac{x-4}{x+8} > 2$
9	$\frac{z+2}{z-6} \geq 9$
10	$1 \leq \frac{2x-3}{x+1} < 2$
11	$\frac{3}{x+2} \leq \frac{1}{x}$
12	$\begin{cases} \frac{3x-2}{2} - \frac{x}{2} \geq \frac{2-x}{6} \\ x \geq 1 - \frac{1-3x^2}{x-4} \end{cases}$
13	$x + \frac{x}{x-3} \geq 5$
14	$(x-1)(x+2)(x-3) < 0$
15	$\left \frac{x^2 - 5x + 4}{x^2 - 4} \right \leq 1$

Вариант 22

1	$63 > 7x^2$
2	$4x - 10x^2 < 0$
3	$(x-13)(20-x) \leq 0$
4	$15y^2 + 20y \leq 75$
5	$\frac{x(x-1)}{3} < 4$
6	$z^2 + 6z + 8 \leq 0$
7	$\frac{x(x^2 - 4)}{(3x-7)(x+2)} \leq 0$
8	$\frac{2x+1}{2+x} \geq 2$
9	$\frac{x-16}{x+2} \leq 7$
10	$1 \leq \frac{2x-3}{x+1} < 2$
11	$(x-1)(x+2)(x-3) < 0$
12	$\begin{cases} \frac{x+7}{x-5} + \frac{3x+1}{2} \geq 0 \\ (5-x)^2 \leq 4 \end{cases}$
13	$(x^2 - 1)(16 - 9x^2) \geq 0$
14	$\frac{x^2 - 9}{x^2 - 2x + 1} > 0$
15	$\left \frac{x^2 - 5x + 4}{x^2 - 4} \right > 1$

Вариант 23

1	$3x^2 \leq 75$
2	$-8x^2 < 12x$
3	$(x-1)(6-x) < 0$
4	$z^2 + 6z + 8 \leq 0$
5	$\frac{x^2 - 4x}{3} > 6x$
6	$x^2 - 5x - 24 \leq 0$
7	$\frac{(x^2 - 3x)(5x+7)^2}{x^2 - 9} \geq 0$
8	$\frac{x-16}{x+2} \leq 7$
9	$\frac{2x+1}{2+x} \geq 2$
10	$0 < \frac{4x+3}{2-0,5x} < 2$
11	$\frac{x^2 + 4x + 4}{2x^2 - x - 1} > 0$
12	$\begin{cases} 3x^2 - 7x + 4 < 0 \\ x^2 - 4 \leq 0 \end{cases}$
13	$x + \frac{x}{x-3} \geq 5$
14	$\frac{3x^2 - 2x - 5}{x-2} > 0$
15	$\left \frac{x^2 - 3x - 1}{x^2 + x + 1} \right \geq 3$

Вариант 24

1	$200 - 72t^2 < 0$
2	$x^2 + 3x \leq 0$
3	$(x-3)(x-8) \geq 0$
4	$2u^2 - 3u - 5 > 0$
5	$0,8x^2 \leq \frac{10x+3}{10}$
6	$z^2 + 6z + 8 \leq 0$
7	$(x^3 - 1)(x^4 - 16) < 0$
8	$\frac{2x+1}{2+x} \geq 2$
9	$\frac{x-1}{x+1} > 2$
10	$1 < \frac{1-3x}{2x-1} \leq 2$
11	$(x-1)(3-x)(x-2)^2 > 0$
12	$\begin{cases} 9x^2 - 4x - 5 < 0 \\ \frac{5x-2}{3-2x} \leq 1 \end{cases}$
13	$(x-1)(x+2)(x-3) < 0$
14	$\frac{x^2 + 4x + 4}{2x^2 - x - 1} > 0$
15	$\frac{ x-3 }{x^2 - 5x + 6} \geq 2$