Контрольная: test4/test4.py
Генерация по данным 844412407114252

Условия

Вариант 1.

1. $\sqrt{x^4-4x^2-4x-9}=\sqrt{x^4-25}$

2. $\sqrt{x^4-5x^2-2x+1}=-x^2+4$

3. $\sqrt{5x+7}-\sqrt{3x+1}=\sqrt{5x-3}$

4. $\sqrt{27x^2+54x+31}+\sqrt{45x^2+90x+54}=-9x^2-18x-4$

5. $(x-3)(x-1)-(7x-7)\sqrt{\dfrac{x-3}{x-1}}=-10$

6. $\sqrt{x^2+2x-35}+\sqrt{|x+10|-15}=-x^2+3x+10$

7. $\sqrt{x^2-18x+80}+\sqrt{x^2-19x+88}=\sqrt[4]{x^2-16x+64}$

8. $x\left(\sqrt{x^2+8x+72}+\sqrt{x}\right)=11-\sqrt{x}$

9. $x+4+\sqrt{x+4}\sqrt[4]{x+5}-2\sqrt{x+5}=0$

10. $\sqrt{x+\sqrt{x-2}}+\sqrt{x-1-2\sqrt{x-2}}=2$

Вариант 2.

1. $\sqrt{x^4-x^2-5x+4}=\sqrt{x^4-1}$

2. $\sqrt{x^4-x^2+5x-3}=-x^2+1$

3. $\sqrt{4x+8}-\sqrt{5x-9}=\sqrt{4x+4}$

4. $\sqrt{27x^2+162x+247}+\sqrt{45x^2+270x+414}=-9x^2-54x-76$

5. $(x+2)(x-7)-(12x-84)\sqrt{\dfrac{x+2}{x-7}}=-27$

6. $\sqrt{x^2+2x-80}+\sqrt{|x-1|-7}=-x^2+7x+8$

7. $\sqrt{x^2-11x+28}+\sqrt{x^2-12x+35}=\sqrt[4]{x^2-14x+49}$

8. $x\left(\sqrt{x^2+4x+20}+\sqrt{x}\right)=7-x$

9. $x-9+8\sqrt{x-9}\sqrt[4]{x-1}-20\sqrt{x-1}=0$

10. $\sqrt{x+\sqrt{x-16}}+\sqrt{x-12-4\sqrt{x-16}}=8$

Вариант 3.

1. $\sqrt{x^4-2x^2-2x-14}=\sqrt{x^4-25}$

2. $\sqrt{x^4+2x^2+4x-6}=-x^2+1$

3. $\sqrt{4x+8}-\sqrt{2x-2}=\sqrt{x+6}$

4. $\sqrt{3x^2-18x+31}+\sqrt{5x^2-30x+54}=-x^2+6x-4$

5. $(x-2)(x+4)-(8x+32)\sqrt{\dfrac{x-2}{x+4}}=-12$

6. $\sqrt{x^2+4x-32}+\sqrt{|x-3|-1}=-x^2+5x-4$

7. $\sqrt{x^2-8x+15}+\sqrt{x^2-7x+12}=\sqrt[4]{x^2-6x+9}$

8. $\sqrt{x}\left(\sqrt{x^2+10x+25}+x\right)=8-x$

9. $x-4+4\sqrt{x-4}\sqrt[4]{x-3}-5\sqrt{x-3}=0$

10. $\sqrt{x+\sqrt{x-5}}+\sqrt{x-4-2\sqrt{x-5}}=8$

Вариант 4.

1. $\sqrt{x^4-3x^2-5x-11}=\sqrt{x^4-36}$

2. $\sqrt{x^4-4x^2+4x+5}=-x^2+1$

3. $\sqrt{2x+4}-\sqrt{4x-5}=\sqrt{x+3}$

4. $\sqrt{12x^2-48x+52}+\sqrt{20x^2-80x+89}=-4x^2+16x-11$

5. $(x-9)(x-3)-(15x-45)\sqrt{\dfrac{x-9}{x-3}}=-54$

6. $\sqrt{x^2+x-56}+\sqrt{|x-8|-1}=-x^2+6x+7$

7. $\sqrt{x^2-7x+10}+\sqrt{x^2-8x+12}=\sqrt[4]{x^2-4x+4}$

8. $x\left(\sqrt{x^2+7x+73}+x\right)=11-\sqrt{x}$

9. $x-2+\sqrt{x-2}\sqrt[4]{x+8}-2\sqrt{x+8}=0$

10. $\sqrt{x+\sqrt{x-3}}+\sqrt{x+46-14\sqrt{x-3}}=9$

Вариант 5.

1. $\sqrt{x^4+x^2-4x-5}=\sqrt{x^4-4}$

2. $\sqrt{x^4-3x^2-4x-1}=-x^2+1$

3. $\sqrt{4x-5}-\sqrt{x-7}=\sqrt{2x+8}$

4. $\sqrt{12x^2+96x+196}+\sqrt{20x^2+160x+329}=-4x^2-32x-59$

5. $(x-2)(x-8)-(9x-72)\sqrt{\dfrac{x-2}{x-8}}=-14$

6. $\sqrt{x^2-4x-45}+\sqrt{|x+7|-16}=-x^2+6x+27$

7. $\sqrt{x^2-15x+50}+\sqrt{x^2-14x+45}=\sqrt[4]{x^2-10x+25}$

8. $\sqrt{x}\left(\sqrt{x^2+9x+26}+x\right)=8-x$

9. $x+9+5\sqrt{x+9}\sqrt[4]{x+10}-14\sqrt{x+10}=0$

10. $\sqrt{x+\sqrt{x-16}}+\sqrt{x-15-2\sqrt{x-16}}=6$

Вариант 6.

1. $\sqrt{x^4+2x^2-4x-13}=\sqrt{x^4-9}$

2. $\sqrt{x^4-3x^2-5x+4}=-x^2+1$

3. $\sqrt{4x-1}-\sqrt{3x-2}=\sqrt{5x-7}$

4. $\sqrt{3x^2+60x+304}+\sqrt{5x^2+100x+509}=-x^2-20x-95$

5. $(x+2)(x+4)-(12x+48)\sqrt{\dfrac{x+2}{x+4}}=-35$

6. $\sqrt{x^2-3x-54}+\sqrt{|x+7|-16}=-x^2+11x-18$

7. $\sqrt{x^2-12x+35}+\sqrt{x^2-13x+42}=\sqrt[4]{x^2-14x+49}$

8. $x\left(\sqrt{x^2+5x+58}+x\right)=10-\sqrt{x}$

9. $x-8+3\sqrt{x-8}\sqrt[4]{x-7}-10\sqrt{x-7}=0$

10. $\sqrt{x+\sqrt{x-9}}+\sqrt{x-8-2\sqrt{x-9}}=9$

Вариант 7.

1. $\sqrt{x^4 - x^2 + 3x - 13} = \sqrt{x^4 - 16}$

2. $\sqrt{x^4 + 2x^2 + 3x - 1} = -x^2 + 1$

3. $\sqrt{2x + 9} - \sqrt{4x - 8} = \sqrt{3x + 7}$

4. $\sqrt{12x^2 - 108x + 247} + \sqrt{20x^2 - 180x + 414} = -4x^2 + 36x - 76$

5. $(x + 14)(x + 11) - (13x + 143)\sqrt{\dfrac{x + 14}{x + 11}} = -36$

6. $\sqrt{x^2 - 2x - 80} + \sqrt{|x + 9| - 19} = -x^2 + 9x + 10$

7. $\sqrt{x^2 - 17x + 70} + \sqrt{x^2 - 16x + 60} = \sqrt[4]{x^2 - 20x + 100}$

8. $\sqrt{x}\left(\sqrt{x^2 + 8x + 7} + x\right) = 6 - x$

9. $x - 10 + 5\sqrt{x - 10}\sqrt[4]{x + 9} - 14\sqrt{x + 9} = 0$

10. $\sqrt{x + \sqrt{x - 16}} + \sqrt{x + 9 - 10\sqrt{x - 16}} = 8$

Вариант 8.

1. $\sqrt{x^4 - 5x^2 - 3x + 9} = \sqrt{x^4 - 9}$

2. $\sqrt{x^4 - 3x^2 - 5x + 5} = -x^2 + 4$

3. $\sqrt{3x + 6} - \sqrt{5x - 6} = \sqrt{5x - 10}$

4. $\sqrt{12x^2 + 132x + 367} + \sqrt{20x^2 + 220x + 614} = -4x^2 - 44x - 116$

5. $(x - 3)(x + 9) - (14x + 126)\sqrt{\dfrac{x - 3}{x + 9}} = -48$

6. $\sqrt{x^2 - x - 56} + \sqrt{|x - 10| - 2} = -x^2 + 9x - 8$

7. $\sqrt{x^2 - 11x + 18} + \sqrt{x^2 - 10x + 16} = \sqrt[4]{x^2 - 4x + 4}$

8. $x\left(\sqrt{x^2 + 2x + 78} + x\right) = 11 - \sqrt{x}$

9. $x + 4 + 8\sqrt{x + 4}\sqrt[4]{x + 9} - 20\sqrt{x + 9} = 0$

10. $\sqrt{x + \sqrt{x - 9}} + \sqrt{x + 7 - 8\sqrt{x - 9}} = 6$

Вариант 9.

1. $\sqrt{x^4-3x^2+4x-3}=\sqrt{x^4-16}$

2. $\sqrt{x^4+x^2+5x+2}=-x^2+1$

3. $\sqrt{2x+8}-\sqrt{x+6}=\sqrt{4x+8}$

4. $\sqrt{27x^2+144x+196}+\sqrt{45x^2+240x+329}=-9x^2-48x-59$

5. $(x-5)(x-3)-(10x-30)\sqrt{\dfrac{x-5}{x-3}}=-16$

6. $\sqrt{x^2+4x-32}+\sqrt{|x+2|-6}=-x^2+5x-4$

7. $\sqrt{x^2-11x+24}+\sqrt{x^2-12x+27}=\sqrt[4]{x^2-6x+9}$

8. $x\left(\sqrt{x^2+4x+44}+\sqrt{x}\right)=9-x$

9. $x+1+5\sqrt{x+1}\sqrt[4]{x+2}-14\sqrt{x+2}=0$

10. $\sqrt{x+\sqrt{x-13}}+\sqrt{x-12-2\sqrt{x-13}}=7$

Вариант 10.

1. $\sqrt{x^4-4x^2+4x-2}=\sqrt{x^4-9}$

2. $\sqrt{x^4-5x^2+5x+11}=-x^2+4$

3. $\sqrt{2x+8}-\sqrt{2x-4}=\sqrt{4x+2}$

4. $\sqrt{12x^2-24x+16}+\sqrt{20x^2-40x+29}=-4x^2+8x+1$

5. $(x-1)(x-15)-(11x-165)\sqrt{\dfrac{x-1}{x-15}}=-28$

6. $\sqrt{x^2-3x-70}+\sqrt{|x-4|-6}=-x^2+6x+40$

7. $\sqrt{x^2-12x+35}+\sqrt{x^2-13x+40}=\sqrt[4]{x^2-10x+25}$

8. $x\left(\sqrt{x^2+5x+43}+x\right)=9-\sqrt{x}$

9. $x+1+3\sqrt{x+1}\sqrt[4]{x+8}-10\sqrt{x+8}=0$

10. $\sqrt{x+\sqrt{x-7}}+\sqrt{x-6-2\sqrt{x-7}}=3$

Вариант 11.

1. $\sqrt{x^4+2x^2+3x-12}=\sqrt{x^4-9}$

2. $\sqrt{x^4-5x^2-3x+4}=-x^2+4$

3. $\sqrt{x+7}-\sqrt{2x+6}=\sqrt{2x+2}$

4. $\sqrt{27x^2-180x+304}+\sqrt{45x^2-300x+509}=-9x^2+60x-95$

5. $(x-10)(x+6)-(6x+36)\sqrt{\dfrac{x-10}{x+6}}=-8$

6. $\sqrt{x^2+4x-32}+\sqrt{|x-6|-2}=-x^2+x+12$

7. $\sqrt{x^2-15x+56}+\sqrt{x^2-14x+48}=\sqrt[4]{x^2-16x+64}$

8. $x\left(\sqrt{x^2+3x+77}+\sqrt{x}\right)=11-x$

9. $x+8+8\sqrt{x+8}\sqrt[4]{x+10}-9\sqrt{x+10}=0$

10. $\sqrt{x+\sqrt{x-9}}+\sqrt{x+7-8\sqrt{x-9}}=8$

Вариант 12.

1. $\sqrt{x^4+3x^2-3x-7}=\sqrt{x^4-4}$

2. $\sqrt{x^4-3x^2-3x+3}=-x^2+1$

3. $\sqrt{x+8}-\sqrt{4x-7}=\sqrt{x-1}$

4. $\sqrt{3x^2-36x+112}+\sqrt{5x^2-60x+189}=-x^2+12x-31$

5. $(x+8)(x+6)-(7x+42)\sqrt{\dfrac{x+8}{x+6}}=-12$

6. $\sqrt{x^2+2x-24}+\sqrt{|x+5|-9}=-x^2+5x-4$

7. $\sqrt{x^2-12x+20}+\sqrt{x^2-13x+30}=\sqrt[4]{x^2-20x+100}$

8. $x\left(\sqrt{x^2+3x+60}+\sqrt{x}\right)=10-\sqrt{x}$

9. $x-9+6\sqrt{x-9}\sqrt[4]{x-8}-7\sqrt{x-8}=0$

10. $\sqrt{x+\sqrt{x-3}}+\sqrt{x+1-4\sqrt{x-3}}=3$

Вариант 13.

1. $\sqrt{x^4-2x^2+4x-15}=\sqrt{x^4-36}$

2. $\sqrt{x^4-3x^2+2x-7}=-x^2+4$

3. $\sqrt{3x+3}-\sqrt{4x-7}=\sqrt{3x-6}$

4. $\sqrt{12x^2-96x+196}+\sqrt{20x^2-160x+329}=-4x^2+32x-59$

5. $(x-15)(x+15)-(14x+210)\sqrt{\dfrac{x-15}{x+15}}=-45$

6. $\sqrt{x^2+3x-54}+\sqrt{|x+10|-16}=-x^2+5x+6$

7. $\sqrt{x^2-10x+16}+\sqrt{x^2-11x+18}=\sqrt[4]{x^2-4x+4}$

8. $x\left(\sqrt{x^2+x+14}+\sqrt{x}\right)=6-x$

9. $x-9+7\sqrt{x-9}\sqrt[4]{x+1}-18\sqrt{x+1}=0$

10. $\sqrt{x+\sqrt{x-10}}+\sqrt{x-6-4\sqrt{x-10}}=5$

Вариант 14.

1. $\sqrt{x^4-5x^2-5x-5}=\sqrt{x^4-16}$

2. $\sqrt{x^4-x^2-5x-3}=-x^2+1$

3. $\sqrt{x+9}-\sqrt{3x+1}=\sqrt{3x-9}$

4. $\sqrt{27x^2-126x+151}+\sqrt{45x^2-210x+254}=-9x^2+42x-44$

5. $(x+4)(x-6)-(9x-54)\sqrt{\dfrac{x+4}{x-6}}=-20$

6. $\sqrt{x^2+x-90}+\sqrt{|x+7|-16}=-x^2+10x-9$

7. $\sqrt{x^2-11x+24}+\sqrt{x^2-10x+21}=\sqrt[4]{x^2-6x+9}$

8. $x\left(\sqrt{x^2+5x+75}+\sqrt{x}\right)=11-\sqrt{x}$

9. $x-2+8\sqrt{x-2}\sqrt[4]{x+1}-9\sqrt{x+1}=0$

10. $\sqrt{x+\sqrt{x-19}}+\sqrt{x-18-2\sqrt{x-19}}=6$

Вариант 15.

1. $\sqrt{x^4-4x^2-4x+9}=\sqrt{x^4-9}$

2. $\sqrt{x^4+x^2-2x-1}=-x^2+1$

3. $\sqrt{4x+3}-\sqrt{3x-6}=\sqrt{3x+2}$

4. $\sqrt{27x^2-72x+52}+\sqrt{45x^2-120x+89}=-9x^2+24x-11$

5. $(x-4)(x+11)-(9x+99)\sqrt{\dfrac{x-4}{x+11}}=-20$

6. $\sqrt{x^2+4x-45}+\sqrt{|x-3|-2}=-x^2+6x-5$

7. $\sqrt{x^2-16x+60}+\sqrt{x^2-15x+54}=\sqrt[4]{x^2-12x+36}$

8. $\sqrt{x}\left(\sqrt{x^2+6x+57}+x\right)=10-x$

9. $x+1+6\sqrt{x+1}\sqrt[4]{x+8}-7\sqrt{x+8}=0$

10. $\sqrt{x+\sqrt{x-6}}+\sqrt{x+3-6\sqrt{x-6}}=8$

Вариант 16.

1. $\sqrt{x^4-5x^2+5x+7}=\sqrt{x^4-4}$

2. $\sqrt{x^4-4x^2-4x+7}=-x^2+4$

3. $\sqrt{2x+2}-\sqrt{2x-2}=\sqrt{x-9}$

4. $\sqrt{12x^2-60x+79}+\sqrt{20x^2-100x+134}=-4x^2+20x-20$

5. $(x+15)(x+11)-(9x+99)\sqrt{\dfrac{x+15}{x+11}}=-18$

6. $\sqrt{x^2+4x-45}+\sqrt{|x-2|-3}=-x^2+6x-5$

7. $\sqrt{x^2-11x+24}+\sqrt{x^2-10x+16}=\sqrt[4]{x^2-16x+64}$

8. $\sqrt{x}\left(\sqrt{x^2+x+62}+x\right)=10-x$

9. $x+5+6\sqrt{x+5}\sqrt[4]{x+6}-16\sqrt{x+6}=0$

10. $\sqrt{x+\sqrt{x-19}}+\sqrt{x-15-4\sqrt{x-19}}=10$

Вариант 17.

1. $\sqrt{x^4-4x^2-4x-4}=\sqrt{x^4-25}$

2. $\sqrt{x^4+x^2+5x-2}=-x^2+1$

3. $\sqrt{5x-5}-\sqrt{x+5}=\sqrt{2x-6}$

4. $\sqrt{3x^2+30x+79}+\sqrt{5x^2+50x+134}=-x^2-10x-20$

5. $(x-7)(x+1)-(16x+16)\sqrt{\dfrac{x-7}{x+1}}=-60$

6. $\sqrt{x^2+2x-80}+\sqrt{|x-5|-3}=-x^2+10x-16$

7. $\sqrt{x^2-19x+90}+\sqrt{x^2-18x+80}=\sqrt[4]{x^2-20x+100}$

8. $x\left(\sqrt{x^2+4x+31}+\sqrt{x}\right)=8-x$

9. $x-8+8\sqrt{x-8}\sqrt[4]{x+7}-20\sqrt{x+7}=0$

10. $\sqrt{x+\sqrt{x-4}}+\sqrt{x+21-10\sqrt{x-4}}=7$

Вариант 18.

1. $\sqrt{x^4+5x^2+3x-13}=\sqrt{x^4-4}$

2. $\sqrt{x^4-5x^2-2x+2}=-x^2+4$

3. $\sqrt{x+3}-\sqrt{3x-3}=\sqrt{3x-1}$

4. $\sqrt{12x^2-84x+151}+\sqrt{20x^2-140x+254}=-4x^2+28x-44$

5. $(x+1)(x+13)-(14x+182)\sqrt{\dfrac{x+1}{x+13}}=-40$

6. $\sqrt{x^2-5x-50}+\sqrt{|x-2|-8}=-x^2+6x+40$

7. $\sqrt{x^2-12x+27}+\sqrt{x^2-13x+36}=\sqrt[4]{x^2-18x+81}$

8. $x\left(\sqrt{x^2+2x+46}+\sqrt{x}\right)=9-\sqrt{x}$

9. $x-3+5\sqrt{x-3}\sqrt[4]{x+9}-14\sqrt{x+9}=0$

10. $\sqrt{x+\sqrt{x-10}}+\sqrt{x-9-2\sqrt{x-10}}=6$

Вариант 19.

1. $\sqrt{x^4-4x^2+2x+1}=\sqrt{x^4-9}$

2. $\sqrt{x^4+2x^2+2x-3}=-x^2+1$

3. $\sqrt{3x+5}-\sqrt{x-2}=\sqrt{x+5}$

4. $\sqrt{3x^2-42x+151}+\sqrt{5x^2-70x+254}=-x^2+14x-44$

5. $(x+13)(x-7)-(12x-84)\sqrt{\dfrac{x+13}{x-7}}=-32$

6. $\sqrt{x^2+2x-24}+\sqrt{|x-9|-5}=-x^2+3x+4$

7. $\sqrt{x^2-9x+14}+\sqrt{x^2-8x+12}=\sqrt[4]{x^2-4x+4}$

8. $x\left(\sqrt{x^2+7x+28}+\sqrt{x}\right)=8-\sqrt{x}$

9. $x-5+2\sqrt{x-5}\sqrt[4]{x+1}-8\sqrt{x+1}=0$

10. $\sqrt{x+\sqrt{x-13}}+\sqrt{x-9-4\sqrt{x-13}}=5$

Вариант 20.

1. $\sqrt{x^4-3x^2+2x-14}=\sqrt{x^4-25}$

2. $\sqrt{x^4-4x^2-2x+3}=-x^2+4$

3. $\sqrt{5x+1}-\sqrt{4x-4}=\sqrt{3x-2}$

4. $\sqrt{3x^2+36x+112}+\sqrt{5x^2+60x+189}=-x^2-12x-31$

5. $(x-1)(x+11)-(15x+165)\sqrt{\dfrac{x-1}{x+11}}=-54$

6. $\sqrt{x^2+x-56}+\sqrt{|x-10|-3}=-x^2+3x+28$

7. $\sqrt{x^2-11x+30}+\sqrt{x^2-12x+35}=\sqrt[4]{x^2-10x+25}$

8. $x\left(\sqrt{x^2+6x+42}+\sqrt{x}\right)=9-x$

9. $x-6+7\sqrt{x-6}\sqrt[4]{x+10}-18\sqrt{x+10}=0$

10. $\sqrt{x+\sqrt{x-2}}+\sqrt{x-1-2\sqrt{x-2}}=4$

Вариант 21.

1. $\sqrt{x^4+3x^2-x-4}=\sqrt{x^4-1}$

2. $\sqrt{x^4-x^2+2x-13}=-x^2+4$

3. $\sqrt{4x-8}-\sqrt{2x-9}=\sqrt{x-3}$

4. $\sqrt{12x^2+108x+247}+\sqrt{20x^2+180x+414}=-4x^2-36x-76$

5. $(x+5)(x+2)-(13x+26)\sqrt{\dfrac{x+5}{x+2}}=-36$

6. $\sqrt{x^2+6x-40}+\sqrt{|x-1|-3}=-x^2+6x-8$

7. $\sqrt{x^2-18x+80}+\sqrt{x^2-17x+70}=\sqrt[4]{x^2-20x+100}$

8. $x\left(\sqrt{x^2+5x+10}+x\right)=6-\sqrt{x}$

9. $x-4+\sqrt{x-4}\sqrt[4]{x+2}-2\sqrt{x+2}=0$

10. $\sqrt{x+\sqrt{x-4}}+\sqrt{x-3-2\sqrt{x-4}}=3$

Вариант 22.

1. $\sqrt{x^4+x^2-3x-15}=\sqrt{x^4-9}$

2. $\sqrt{x^4+4x^2+4x-5}=-x^2+1$

3. $\sqrt{2x+9}-\sqrt{3x+6}=\sqrt{3x-1}$

4. $\sqrt{27x^2-18x+7}+\sqrt{45x^2-30x+14}=-9x^2+6x+4$

5. $(x-14)(x+2)-(7x+14)\sqrt{\dfrac{x-14}{x+2}}=-12$

6. $\sqrt{x^2+2x-80}+\sqrt{|x-5|-3}=-x^2+9x-8$

7. $\sqrt{x^2-16x+60}+\sqrt{x^2-17x+66}=\sqrt[4]{x^2-12x+36}$

8. $\sqrt{x}\left(\sqrt{x^2+3x+45}+x\right)=9-x$

9. $x-8+7\sqrt{x-8}\sqrt[4]{x+5}-18\sqrt{x+5}=0$

10. $\sqrt{x+\sqrt{x-1}}+\sqrt{x+8-6\sqrt{x-1}}=4$

Вариант 23.

1. $\sqrt{x^4 - x^2 + 5x - 6} = \sqrt{x^4 - 9}$

2. $\sqrt{x^4 - 5x^2 - 3x + 3} = -x^2 + 1$

3. $\sqrt{2x - 3} - \sqrt{2x - 10} = \sqrt{3x - 8}$

4. $\sqrt{27x^2 + 126x + 151} + \sqrt{45x^2 + 210x + 254} = -9x^2 - 42x - 44$

5. $(x - 11)(x + 9) - (6x + 54)\sqrt{\dfrac{x - 11}{x + 9}} = -8$

6. $\sqrt{x^2 + 6x - 40} + \sqrt{|x + 3| - 7} = -x^2 + 2x + 8$

7. $\sqrt{x^2 - 12x + 35} + \sqrt{x^2 - 11x + 28} = \sqrt[4]{x^2 - 14x + 49}$

8. $\sqrt{x}\left(\sqrt{x^2 + 9x + 6} + x\right) = 6 - x$

9. $x - 3 + 6\sqrt{x - 3}\sqrt[4]{x + 10} - 16\sqrt{x + 10} = 0$

10. $\sqrt{x + \sqrt{x - 2}} + \sqrt{x + 2 - 4\sqrt{x - 2}} = 8$

Вариант 24.

1. $\sqrt{x^4 + 3x^2 - 4x - 15} = \sqrt{x^4 - 4}$

2. $\sqrt{x^4 + 3x^2 + 5x - 3} = -x^2 + 1$

3. $\sqrt{4x + 8} - \sqrt{2x - 2} = \sqrt{3x - 2}$

4. $\sqrt{3x^2 + 12x + 16} + \sqrt{5x^2 + 20x + 29} = -x^2 - 4x + 1$

5. $(x - 8)(x + 7) - (9x + 63)\sqrt{\dfrac{x - 8}{x + 7}} = -20$

6. $\sqrt{x^2 + x - 56} + \sqrt{|x - 10| - 3} = -x^2 + 4x + 21$

7. $\sqrt{x^2 - 12x + 20} + \sqrt{x^2 - 13x + 22} = \sqrt[4]{x^2 - 4x + 4}$

8. $x\left(\sqrt{x^2 + 8x + 16} + \sqrt{x}\right) = 7 - x$

9. $x + 2 + 4\sqrt{x + 2}\sqrt[4]{x + 3} - 12\sqrt{x + 3} = 0$

10. $\sqrt{x + \sqrt{x - 9}} + \sqrt{x + 55 - 16\sqrt{x - 9}} = 9$

Вариант 25.

1. $\sqrt{x^4+x^2-3x-3}=\sqrt{x^4-1}$

2. $\sqrt{x^4-3x^2+3x+3}=-x^2+1$

3. $\sqrt{4x+6}-\sqrt{3x-3}=\sqrt{x+6}$

4. $\sqrt{12x^2-36x+31}+\sqrt{20x^2-60x+54}=-4x^2+12x-4$

5. $(x-10)(x+14)-(8x+112)\sqrt{\dfrac{x-10}{x+14}}=-15$

6. $\sqrt{x^2+7x-30}+\sqrt{|x+6|-9}=-x^2+x+6$

7. $\sqrt{x^2-14x+45}+\sqrt{x^2-15x+54}=\sqrt[4]{x^2-18x+81}$

8. $x\left(\sqrt{x^2+3x+96}+\sqrt{x}\right)=12-\sqrt{x}$

9. $x+1+3\sqrt{x+1}\sqrt[4]{x+6}-10\sqrt{x+6}=0$

10. $\sqrt{x+\sqrt{x-8}}+\sqrt{x+28-12\sqrt{x-8}}=9$

Вариант 26.

1. $\sqrt{x^4-3x^2-3x-7}=\sqrt{x^4-16}$

2. $\sqrt{x^4+2x^2+3x-4}=-x^2+1$

3. $\sqrt{5x-5}-\sqrt{x-5}=\sqrt{4x-5}$

4. $\sqrt{27x^2-36x+16}+\sqrt{45x^2-60x+29}=-9x^2+12x+1$

5. $(x-2)(x-7)-(8x-56)\sqrt{\dfrac{x-2}{x-7}}=-12$

6. $\sqrt{x^2+2x-48}+\sqrt{|x-8|-2}=-x^2+2x+24$

7. $\sqrt{x^2-13x+36}+\sqrt{x^2-14x+40}=\sqrt[4]{x^2-8x+16}$

8. $x\left(\sqrt{x^2+3x+12}+\sqrt{x}\right)=6-x$

9. $x-2+6\sqrt{x-2}\sqrt[4]{x+9}-16\sqrt{x+9}=0$

10. $\sqrt{x+\sqrt{x-10}}+\sqrt{x+71-18\sqrt{x-10}}=10$

Вариант 27.

1. $\sqrt{x^4+5x^2-5x-2}=\sqrt{x^4-1}$

2. $\sqrt{x^4+5x^2+5x-10}=-x^2+1$

3. $\sqrt{3x-8}-\sqrt{x-5}=\sqrt{2x-5}$

4. $\sqrt{27x^2+198x+367}+\sqrt{45x^2+330x+614}=-9x^2-66x-116$

5. $(x-2)(x+1)-(10x+10)\sqrt{\dfrac{x-2}{x+1}}=-24$

6. $\sqrt{x^2+x-72}+\sqrt{|x-4|-4}=-x^2+5x+24$

7. $\sqrt{x^2-9x+14}+\sqrt{x^2-8x+7}=\sqrt[4]{x^2-14x+49}$

8. $\sqrt{x}\left(\sqrt{x^2+7x+56}+x\right)=10-x$

9. $x+1+4\sqrt{x+1}\sqrt[4]{x+10}-12\sqrt{x+10}=0$

10. $\sqrt{x+\sqrt{x-1}}+\sqrt{x+3-4\sqrt{x-1}}=3$

Вариант 28.

1. $\sqrt{x^4+2x^2+5x-10}=\sqrt{x^4-9}$

2. $\sqrt{x^4-3x^2+2x-1}=-x^2+4$

3. $\sqrt{3x+9}-\sqrt{2x+9}=\sqrt{2x-6}$

4. $\sqrt{27x^2+18x+7}+\sqrt{45x^2+30x+14}=-9x^2-6x+4$

5. $(x+10)(x-10)-(8x-80)\sqrt{\dfrac{x+10}{x-10}}=-12$

6. $\sqrt{x^2+x-72}+\sqrt{|x+2|-10}=-x^2+5x+24$

7. $\sqrt{x^2-6x+8}+\sqrt{x^2-5x+4}=\sqrt[4]{x^2-8x+16}$

8. $x\left(\sqrt{x^2+10x+38}+\sqrt{x}\right)=9-\sqrt{x}$

9. $x+2+8\sqrt{x+2}\sqrt[4]{x+3}-9\sqrt{x+3}=0$

10. $\sqrt{x+\sqrt{x-5}}+\sqrt{x-4-2\sqrt{x-5}}=3$

Вариант 29.

1. $\sqrt{x^4+x^2-5x-6}=\sqrt{x^4-9}$

2. $\sqrt{x^4+5x^2+4x-7}=-x^2+1$

3. $\sqrt{5x+5}-\sqrt{3x+1}=\sqrt{5x+3}$

4. $\sqrt{12x^2+60x+79}+\sqrt{20x^2+100x+134}=-4x^2-20x-20$

5. $(x-7)(x-11)-(7x-77)\sqrt{\dfrac{x-7}{x-11}}=-12$

6. $\sqrt{x^2+4x-60}+\sqrt{|x+9|-15}=-x^2+8x-12$

7. $\sqrt{x^2-14x+48}+\sqrt{x^2-15x+54}=\sqrt[4]{x^2-12x+36}$

8. $x\left(\sqrt{x^2+7x+17}+x\right)=7-\sqrt{x}$

9. $x-9+8\sqrt{x-9}\sqrt[4]{x-5}-9\sqrt{x-5}=0$

10. $\sqrt{x+\sqrt{x-19}}+\sqrt{x-3-8\sqrt{x-19}}=8$

Вариант 30.

1. $\sqrt{x^4+2x^2-2x-9}=\sqrt{x^4-4}$

2. $\sqrt{x^4-2x^2+4x-3}=-x^2+4$

3. $\sqrt{4x+1}-\sqrt{x-3}=\sqrt{x+9}$

4. $\sqrt{3x^2+48x+196}+\sqrt{5x^2+80x+329}=-x^2-16x-59$

5. $(x-12)(x+4)-(11x+44)\sqrt{\dfrac{x-12}{x+4}}=-24$

6. $\sqrt{x^2-2x-80}+\sqrt{|x+7|-17}=-x^2+9x+10$

7. $\sqrt{x^2-8x+15}+\sqrt{x^2-9x+20}=\sqrt[4]{x^2-10x+25}$

8. $x\left(\sqrt{x^2+8x+91}+\sqrt{x}\right)=12-x$

9. $x+1+3\sqrt{x+1}\sqrt[4]{x+9}-10\sqrt{x+9}=0$

10. $\sqrt{x+\sqrt{x-4}}+\sqrt{x+5-6\sqrt{x-4}}=9$

Контрольная: test4/test4.py
Генерация по данным 844412407114252

Ответы

Вариант 1.

1. $-\frac{1}{2} - \frac{1}{2}\sqrt{17}$

2. $\frac{1}{3} - \frac{1}{3}\sqrt{46}$

3. $-\frac{19}{51} + \frac{4\sqrt{319}}{51}$

4. -1

5. $2 + \sqrt{26}; 2 + \sqrt{5}$

6. 5

7. $11; 8$

8. 1

9. $\frac{1}{2}\sqrt{5} - \frac{7}{2}$

10. 3

Вариант 2.

1. $-\frac{5}{2} - \frac{3}{2}\sqrt{5}$

2. $-\frac{5}{2} + \frac{1}{2}\sqrt{41}$

3. $-\frac{3}{5} + \frac{8\sqrt{286}}{55}$

4. -3

5. $\frac{5}{2} + \frac{3}{2}\sqrt{13}; \frac{5}{2} + \frac{9}{2}\sqrt{5}$

6. 8

7. $4; 7$

8. 1

9. $17 + 8\sqrt{3}$

10. 32

Вариант 3.

1. $-\frac{1}{2} - \frac{1}{2}\sqrt{23}$

2. $-\frac{1}{2} + \sqrt{2}$

3. $-\frac{16}{7} + \frac{8\sqrt{11}}{7}$

4. 3

5. $-1 + 3\sqrt{5}; -1 + \sqrt{13}$

6. 4

7. $3; 5$

8. 1

9. $\frac{1}{2}\sqrt{5} + \frac{9}{2}$

10. 21

Вариант 4.

1. $-\frac{5}{6} - \frac{5}{6}\sqrt{13}$

2. $1 - \sqrt{3}$

3. $-\frac{32}{7} + \frac{4}{7}\sqrt{106}$

4. 2

5. $6 + 3\sqrt{10}; 6 + 3\sqrt{5}$

6. 7

7. $6; 2$

8. 1

9. $\frac{5}{2} + \frac{1}{2}\sqrt{41}$

10. $\frac{556}{9}$

Вариант 5.

1. $2+\sqrt{5}$

2. $-2+\sqrt{2}$

3. $\frac{6}{7}+\frac{8\sqrt{29}}{7}$

4. -4

5. $5+\sqrt{13}; 5+\sqrt{58}$

6. 9

7. $5; 10$

8. 1

9. $-1+4\sqrt{5}$

10. $\frac{521}{25}$

Вариант 6.

1. $1+\sqrt{3}$

2. $-\frac{5}{2}+\frac{1}{2}\sqrt{37}$

3. $\frac{15}{22}+\frac{1}{22}\sqrt{313}$

4. -10

5. $-3+\sqrt{26}; -3+5\sqrt{2}$

6. 9

7. $7; 5$

8. 1

9. $16+4\sqrt{5}$

10. $\frac{250}{9}$

Вариант 7.

1. $\frac{3}{2} + \frac{1}{2}\sqrt{21}$

2. $-\frac{3}{8} + \frac{1}{8}\sqrt{41}$

3. 2

4. $\frac{9}{2}$

5. $-\frac{25}{2} + \frac{1}{2}\sqrt{73}; -\frac{25}{2} + \frac{3}{2}\sqrt{37}$

6. 10

7. $10; 6$

8. 1

9. $18 + 4\sqrt{23}$

10. $\frac{433}{9}; \frac{449}{25}$

Вариант 8.

1. $-\frac{3}{10} - \frac{3}{10}\sqrt{41}$

2. $\frac{1}{2} - \frac{7\sqrt{5}}{10}$

3. $\frac{2}{17} + \frac{8\sqrt{195}}{51}$

4. $-\frac{11}{2}$

5. $7; -3 + 6\sqrt{2}$

6. 8

7. $9; 2$

8. 1

9. 16

10. $\frac{250}{9}; \frac{106}{9}$

Вариант 9.

1. $\frac{2}{3} + \frac{1}{3}\sqrt{43}$

2. $-\frac{5}{6} + \frac{1}{6}\sqrt{13}$

3. -2

4. $-\frac{8}{3}$

5. $4 + \sqrt{5}; 4 + \sqrt{65}$

6. 4

7. $3; 9$

8. 1

9. $7 + 4\sqrt{5}$

10. 22

Вариант 10.

1. $\frac{1}{2} + \sqrt{2}$

2. $-\frac{5}{6} + \frac{1}{6}\sqrt{85}$

3. $-1 + \frac{1}{2}\sqrt{37}$

4. 1

5. $8 + 7\sqrt{2}; 8 + \sqrt{65}$

6. 10

7. $5; 8$

8. 1

9. $7 + 4\sqrt{11}$

10. 8

Вариант 11.

1. $-\frac{3}{4} - \frac{1}{4}\sqrt{33}$

2. $\frac{1}{2} - \frac{1}{2}\sqrt{17}$

3. $-\frac{29}{7} + \frac{16\sqrt{2}}{7}$

4. $\frac{10}{3}$

5. $2 + 2\sqrt{17}; 2 + 4\sqrt{5}$

6. 4

7. $6; 8$

8. 1

9. -6

10. $\frac{954}{25}$

Вариант 12.

1. $\frac{1}{2}\sqrt{5} + \frac{1}{2}$

2. $-\frac{3}{2} + \frac{1}{2}\sqrt{17}$

3. $\frac{19}{7}$

4. 6

5. $-7 + \sqrt{10}; -7 + \sqrt{17}$

6. 4

7. $10; 2$

8. 1

9. $\frac{1}{2}\sqrt{5} + \frac{19}{2}$

10. 7

Вариант 13.

1. $1+\frac{1}{2}\sqrt{46}$

2. $-\frac{1}{5}+\frac{2}{5}\sqrt{29}$

3. $\frac{13}{16}+\frac{3}{16}\sqrt{97}$

4. 4

5. $5\sqrt{10}; 3\sqrt{34}$

6. 6

7. $9; 2$

8. 1

9. $17+4\sqrt{14}$

10. $\frac{419}{25}; \frac{251}{25}$

Вариант 14.

1. $-\frac{1}{2}-\frac{7\sqrt{5}}{10}$

2. $\frac{5}{2}-\frac{1}{2}\sqrt{41}$

3. $-\frac{37}{11}+\frac{4}{11}\sqrt{309}$

4. $\frac{7}{3}$

5. $1+5\sqrt{2}; 1+\sqrt{41}$

6. 9

7. $3; 8$

8. 1

9. $\frac{5}{2}+\frac{1}{2}\sqrt{13}$

10. 23

Вариант 15.

1. $-\frac{1}{2} - \frac{1}{2}\sqrt{19}$

2. $\frac{1}{3} - \frac{1}{3}\sqrt{7}$

3. $\frac{5}{16} + \frac{3}{16}\sqrt{89}$

4. $\frac{4}{3}$

5. $5; -\frac{7}{2} + \frac{5}{2}\sqrt{13}$

6. 5

7. $10; 6$

8. 1

9. $-\frac{1}{2} + \frac{1}{2}\sqrt{29}$

10. 31

Вариант 16.

1. $\frac{1}{2} + \frac{7\sqrt{5}}{10}$

2. $\frac{1}{2} - \frac{1}{2}\sqrt{10}$

3. $\frac{27}{7} + \frac{8\sqrt{22}}{7}$

4. $\frac{5}{2}$

5. $-13 + 2\sqrt{10}; -13 + \sqrt{13}$

6. 5

7. $2; 8$

8. 1

9. $3 + 4\sqrt{5}$

10. 44

Вариант 17.

1. $-\frac{1}{2} - \frac{1}{2}\sqrt{22}$

2. $-\frac{5}{6} + \frac{1}{6}\sqrt{61}$

3. $-4 + 5\sqrt{2}$

4. -5

5. $3 + 2\sqrt{13}; 3 + 2\sqrt{29}$

6. 8

7. $10; 8$

8. 1

9. $16 + 4\sqrt{19}$

10. $4; \frac{884}{25}$

Вариант 18.

1. $-\frac{3}{10} - \frac{3}{10}\sqrt{21}$

2. $\frac{1}{3} - \frac{1}{3}\sqrt{43}$

3. $-1 + \frac{4}{11}\sqrt{33}$

4. $\frac{7}{2}$

5. $-7 + 2\sqrt{34}; -7 + 2\sqrt{13}$

6. 10

7. $3; 9$

8. 1

9. 27

10. $\frac{419}{25}$

Вариант 19.

1. $\frac{1}{4} + \frac{1}{4}\sqrt{41}$

2. $-\frac{1}{4} + \frac{1}{4}\sqrt{17}$

3. $-\frac{4}{3} + \frac{2}{3}\sqrt{37}$

4. 7

5. $-3 + 2\sqrt{41}; -3 + 2\sqrt{29}$

6. 4

7. $2; 7$

8. 1

9. $13 + 4\sqrt{10}$

10. $\frac{469}{25}; \frac{341}{25}$

Вариант 20.

1. $\frac{1}{3} + \frac{1}{3}\sqrt{34}$

2. $\frac{1}{4} - \frac{1}{4}\sqrt{53}$

3. $\frac{13}{22} + \frac{1}{11}\sqrt{89}$

4. -6

5. $-5 + 3\sqrt{13}; 6\sqrt{2} - 5$

6. 7

7. $5; 7$

8. 1

9. $14 + 8\sqrt{5}$

10. $\frac{771}{121}$

Вариант 21.

1. $\frac{1}{6} + \frac{1}{6}\sqrt{37}$

2. $-\frac{1}{7} + \frac{2}{7}\sqrt{51}$

3. $\frac{34}{7} + \frac{16\sqrt{2}}{7}$

4. $-\frac{9}{2}$

5. $-\frac{7}{2} + \frac{3}{2}\sqrt{37}; -\frac{7}{2} + \frac{1}{2}\sqrt{73}$

6. 4

7. $7; 10$

8. 1

9. 7

10. $4; \frac{52}{9}$

Вариант 22.

1. $\frac{3}{2} + \frac{1}{2}\sqrt{33}$

2. $-\frac{1}{3} + \frac{1}{3}\sqrt{10}$

3. $\frac{2}{5}$

4. $\frac{1}{3}$

5. $6 + 4\sqrt{5}; 6 + \sqrt{73}$

6. 8

7. $6; 11$

8. 1

9. $16 + 4\sqrt{17}$

10. $1; \frac{281}{25}$

Вариант 23.

1. $\frac{5}{2} + \frac{1}{2}\sqrt{37}$

2. $-\frac{1}{2} + \frac{1}{6}\sqrt{33}$

3. 5

4. $-\frac{7}{3}$

5. $1 + 2\sqrt{26}; 1 + 2\sqrt{29}$

6. 4

7. $7; 4$

8. 1

9. $11 + 4\sqrt{17}$

10. $\frac{214}{9}$

Вариант 24.

1. $\frac{2}{3} + \frac{1}{3}\sqrt{37}$

2. $-\frac{1}{2} + \frac{1}{10}\sqrt{105}$

3. $\frac{8}{23} + \frac{8\sqrt{47}}{23}$

4. -2

5. $\frac{1}{2} + \frac{5}{2}\sqrt{13}; 9$

6. 7

7. $2; 11$

8. 1

9. $6 + 4\sqrt{5}$

10. 73

Вариант 25.

1. $\frac{3}{2} + \frac{1}{2}\sqrt{17}$

2. $\frac{3}{2} - \frac{1}{2}\sqrt{17}$

3. $-\frac{5}{2} + \sqrt{13}$

4. $\frac{3}{2}$

5. $-2 + 3\sqrt{17}; 11$

6. 3

7. $5; 9$

8. 1

9. 19

10. 57

Вариант 26.

1. $-\frac{1}{2} - \frac{1}{2}\sqrt{13}$

2. $-\frac{3}{8} + \frac{1}{8}\sqrt{89}$

3. $\frac{25}{8} + \frac{5}{8}\sqrt{13}$

4. $\frac{2}{3}$

5. $\frac{9}{2} + \frac{1}{2}\sqrt{41}; 11$

6. 6

7. $10; 4$

8. 1

9. $10 + 4\sqrt{15}$

10. 91

Вариант 27.

1. $\frac{1}{2} + \frac{3}{10}\sqrt{5}$

2. $-\frac{5}{14} + \frac{3}{14}\sqrt{37}$

3. $\frac{15}{4} + \frac{1}{4}\sqrt{33}$

4. $-\frac{11}{3}$

5. $\frac{1}{2} + \frac{1}{2}\sqrt{73}; \frac{1}{2} + \frac{3}{2}\sqrt{17}$

6. 8

7. $1; 7$

8. 1

9. $7 + 4\sqrt{13}$

10. $1; \frac{697}{121}$

Вариант 28.

1. $-\frac{5}{4} - \frac{1}{4}\sqrt{33}$

2. $-\frac{1}{5} + \frac{1}{5}\sqrt{86}$

3. $-\frac{6}{5} + \frac{2}{5}\sqrt{114}$

4. $-\frac{1}{3}$

5. $2\sqrt{34}; 2\sqrt{26}$

6. 8

7. $1; 4$

8. 1

9. $\frac{1}{2}\sqrt{5} - \frac{3}{2}$

10. $\frac{526}{81}; \frac{46}{9}$

Вариант 29.

1. $\frac{5}{2} + \frac{1}{2}\sqrt{13}$

2. $-\frac{2}{7} + \frac{2}{7}\sqrt{15}$

3. $-\frac{11}{51}$

4. $-\frac{5}{2}$

5. $9 + \sqrt{13}; 9 + 2\sqrt{5}$

6. 6

7. $9; 6$

8. 1

9. $\frac{19}{2} + \frac{1}{2}\sqrt{17}$

10. $44; \frac{940}{49}$

Вариант 30.

1. $\frac{1}{2} + \frac{1}{2}\sqrt{11}$

2. $-\frac{1}{3} + \frac{1}{6}\sqrt{118}$

3. $\frac{133}{44}$

4. -8

5. $4 + \sqrt{73}; 4 + 8\sqrt{2}$

6. 10

7. $5; 3$

8. 1

9. $7 + 8\sqrt{3}$

10. $\frac{884}{25}$