משוואות ריבועיות

1. $x^2 = 49$
2. $2x^2 - 72 = 0$
3. $16x^2 - 9 = 0$
4. $120 - x^2 = 2x^2 - 72$
5. $-3x(5-2x) + 3x = 2(x^2 - 6x + 8)$
6. $(2x-5)(x-7) = x(x-12) - 7x + 116$
7. $\frac{11}{3x^2+8} = \frac{3}{4x^2-1}$
8. $\frac{x}{x+6} + \frac{x}{x-6} = \frac{8}{3}$
9. $x^2 - 6x = 0$
10. $4x^2 - 7x = 0$
11. $(3x+5)^2 - 5(2x+5) = 0$
12. $(5x+6)^2 = 4(x-3)^2$
13. $\frac{x+2}{x+3} = \frac{3x+4}{6-x}$
14. $\frac{(3x-2)^2}{4} = \frac{(4x-3)^2}{9}$
15. $x^2 - 8x + 15 = 0$
16. $-x^2 + 13x + 30 = 0$
17. $x^2 - 16x - 420 = 0$
18. $3x(x-4) + 7 = x^2 + 3x$
19. $(x-5)^2 + x(x+2) = 89$
20. $(x+9)^2 + (x+5)(x-2) = 45 - 2x^2$
21. $x(5x-20) + (2x-5)^2 = 181 - (x+3)(x+2)$
22. $(4x+1)^2 - 4(3x-1)^2 + (x-7)^2 = 2(x+1)$
23. $(x+2)(x-3)(x+4) = (x+6)(x-5)(x-1)$
24. $\frac{19}{x} = 2 + \frac{x-2}{7}$
25. $\frac{5}{x+1} + \frac{3}{x-1} = 2$
26. $\frac{3}{x-4} + \frac{4}{x-2} = \frac{10}{x}$
27. $\frac{x-3}{x+2} + \frac{x-1}{x-2} = \frac{x^2+16}{x^2-4}$
28. $\frac{6}{x-2} + \frac{4}{x-3} = \frac{x^2-2}{x^2-5x+6}$
29. $\frac{x-3}{x-7} - \frac{2x}{3-x} - \frac{7x+9}{x^2-10x+21} = 0$
30. $\frac{9}{4x^2-1} = \frac{5}{2x+1} - \frac{2}{6x-3} + 2$

תשובות

1. ± 7
2. ± 6
3. $\pm \frac{3}{4}$
4. ± 8
5. ± 2
6. ± 9
7. ± 1
8. ± 12
9. $0, 6$
10. $0, \frac{7}{4}$
11. $0, -\frac{20}{9}$
12. $0, -4$
13. $0, -2\frac{1}{4}$
14. $0, \frac{12}{17}$
15. $3, 5$
16. $15, -2$
17. $30, -14$
18. $7, \frac{1}{2}$
19. $8, -4$
20. $-2, -3\frac{1}{4}$
21. $6, -2\frac{1}{2}$
22. $2, -\frac{22}{19}$
23. $2, -9$
24. $7, -19$
25. $4, 0$
26. $10, \frac{8}{3}$
27. 6
28. $4, 6$
29. $9, 0$
30. $1, -\frac{25}{12}$

31. $\frac{3}{2(x+1)}+\frac{4}{x^2-1}=\frac{3x}{2(x-1)^2}$

32. $\frac{5}{3x+2}-\frac{5x-2}{9x^2-6x}-\frac{5(x-1)}{9x^2-4}=0$

33. $\frac{6}{2x+5}-\frac{8x-11}{6x-15}=\frac{1}{3}-\frac{14x^2-20}{8x^2-50}$

34. $\frac{3x+6}{x^2+5x-14}+\frac{4}{x^2-8x+12}=\frac{x+12}{x^2+x-42}$

35. $\frac{8}{(x+3)^2}-\frac{4}{x^2-9}=\frac{10}{x^2-9x+18}$

36. $\frac{20}{x^2-8x}-\frac{x-10}{x^2+8x}=\frac{36}{x^2-64}$

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

38. $\frac{1}{x-5}-\frac{5}{3x+15}=\frac{8}{x^2-25}$

39. $\frac{4}{2x^2+3x-2}-\frac{3}{2x^2-5x+2}=\frac{x-6}{x^2-4}$

40. $\frac{5}{2x^2+3x-2}-\frac{3}{2x^2-5x+2}+\frac{2x}{x^2-4}=0$

41. $x^2+\frac{x-1}{x^2+x-12}=12-x+\frac{x-1}{x^2+x-12}$

תשובות

31. -5
32. $1, \frac{4}{15}$
33. $2, -20$
34. $1, 8$
35. $1, -21$
36. 10
37. 6
38. 8
39. 5
40. אין פתרון
41. אין פתרון