

תרגילים לחזרה:

אלגברה: פתור את המשוואות הבאות:

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

$$1 - \frac{x-2}{x-4} + \frac{1}{2-x} = \frac{5x-4}{x^2-6x+8} \quad .4$$

$$\frac{x+2}{x-1} + \frac{1}{x+4} - \frac{4x+11}{x^2+3x-4} = 0 \quad .6$$

$$x^5 - 16x = 0 \quad .8$$

$$(x^2 - 6x)^2 + 2(x-3)^2 = 81 \quad .10$$

$$x^4 - 3x^2 - 4 = 0 \quad .12$$

$$x^4 + 13x^2 + 36 = 0 \quad .14$$

$$\frac{2x^2}{x^2-4} - \frac{8x^2+3}{x^4-4x^2} = 3 \quad .16$$

$$(3x^2 + 5x)^2 - 4 = 0 \quad .18$$

$$16(x + \frac{1}{x}) - 20 = 3(x + \frac{1}{x})^2 \quad .20$$

$$\frac{3x^2 + 18x + 27}{x^2 - 10x + 25} - \frac{2x+6}{x-5} - 5 = 0 \quad .22$$

פרק לגורמים, מונים ומכנים ופתור בשיטת ההצבה.

$$\frac{9x}{8x^2-50} - \frac{1}{x} = \frac{5}{5x-2x^2} \quad .1$$

$$\frac{3x}{x-1} - \frac{2x}{x+2} = \frac{3x-6}{x^2+x-2} \quad .3$$

$$\frac{2x-1}{2x+4} - \frac{1}{3x^2-12} - \frac{x-29}{12-6x} = 3 \quad .5$$

$$\frac{x+1}{x-2} - \frac{x+2}{x+3} + \frac{4x+7}{6-x-x^2} = 0 \quad .7$$

$$81x^6 - x^2 = 0 \quad .9$$

$$x^4 - 5x^2 + 4 = 0 \quad .11$$

$$9x^4 - 6x^2 + 1 = 0 \quad .13$$

$$\frac{16}{x^2} = 13 - (x+2)(x-2) \quad .15$$

$$(x^2 - 2x)^2 - 11(x^2 - 2x) + 24 = 0 \quad .17$$

$$(x^2 + 8x + 3)(x^2 + 8x + 4) = 12 \quad .19$$

$$(x^2 - 5)^4 + 6(x^2 - 5)^2 - 7 = 0 \quad .21$$

$$x^4 - 16 = 0 \quad .2$$

$$x^3 + 3x^2 - 40x = 0 \quad .4$$

$$4x^3 - 12x^2 + 9x = 0 \quad .6$$

$$\frac{x^3 - 2x^2}{x-2} = 4x - 4 \quad .8$$

$$\frac{x^3 - 4x}{x^2 + 2x} + x^2 = 40 \quad .10$$

$$x^4 - 5x^2 + 4 = 0 \quad .12$$

$$x^6 - 9x^3 + 8 = 0 \quad .14$$

$$x^4 - 8x^2 + 16 = 0 \quad .16$$

$$x^4 - 21x^2 + 80 = 0 \quad .18$$

$$2x^4 - 5x^2 = 28 - x^4 \quad .20$$

$$3x^4 + 8x^2 - 315 = 0 \quad .22$$

$$\frac{x^2+2}{x^2-2} = 2x^2 - 5 \quad .24$$

$$x^6 - 19x^3 - 216 = 0 \quad .26$$

$$6x^4 + 17x^3 + 5x^2 = 0 \quad .25$$

$$(x^2 - 5x)^2 - 2(x^2 - 5x) - 24 = 0 \quad .27$$

$$(x^2 + x)(x^2 + x + 10) = 24 \quad .28$$

$$\frac{4}{x^2-1} - \frac{2x^2-3}{x^4-1} = 1 \quad .30$$

$$\frac{9}{x^2} = 9 - (x+1)(x-1) \quad .32$$

$$\frac{6x^2-6x}{x-1} - 5x^2 = x^3 \quad .34$$

$$x^3 - 5x^2 = 0 \quad .1$$

$$32x^6 - 2x^2 = 0 \quad .3$$

$$x^3 - 12x^2 + 36x = 0 \quad .5$$

$$\frac{x^3 + 3x^2}{x+3} = 9 \quad .7$$

$$\frac{4x^4 - 9x^2}{x^2 - 9} = x^2 \quad .9$$

$$x^3 + 5x^2 - 9x - 45 = 0 \quad .11$$

$$3x^3 - 4x^2 - 12x + 16 = 0 \quad .13$$

$$x^4 - 13x^2 + 36 = 0 \quad .15$$

$$x^4 - 7x^2 - 18 = 0 \quad .17$$

$$3x^4 - 8x^2 + 5 = 0 \quad .19$$

$$x^4 + 9x^2 + 8 = 0 \quad .21$$

$$x^2(x^2 - 9) + 5 = x^2 - 4 \quad .23$$

פתרונות: 1. -10, -4.2, -3.3, 1.5, 4, 3/7, -3.5, 6. קבוצה ריקה 7. x ≠ 2, -3 8. 0,2,-2.14 קבוצה ריקה 13. ±√3 12. 2,-2 11. 1,2,-2,-1 10. 3,7,-1 9. 0,1,3,-1/3 15. ±1, ±√3 16. 1,4,-4,-1 17. 1,17 22. ±2, ±√6 21. 1,3,1/3 20. 3,4,-2,-1 18. 1/3,-2/3,-2,-1 19. 0,-8,-7,-1

$$\frac{2x^3 - 50x}{2x - 10} = 9x + 5 \quad .36$$

$$(x^2 + x + 1)(x^2 + x - 3) + 3 = 0 \quad .35$$

$$(x^4 - x^2)(x - 6)^2 = 0 \quad .38$$

$$\frac{2x}{x^2 - 3} + \frac{x}{x^2 + 3} = \frac{6}{x^5 - 9x} \quad .37$$

$$(x - 6)^3 - (x - 6) = 0 \quad .40$$

$$(2x^2 - 5x)^2 = 2x^2 - 5x + 6 \quad .39$$

תשובות:

0.9 קבוצה ריקה 8. 3.7 0, 3/2 6. 0,6.5 0,5,-8 4. 0, ±1/2 3. ±2 2. 0,5.1 ±2 17. ±2 16. ±2, ±3 15. 2,1 14. ±2, 4/3 13. ±2, ±1 12. -5, ±3 11. 6,-7 10. ±1, ±3 23. ±3 22. קבוצה ריקה 21. ±2 20. ±1, ±√5/3 19. ±4, ±√5 18. ±2 30. 0.5,-4,2.5,1 29. 1,-2 28. ±1,4,6 27. 2,-3 26. 0,-1/3,-2 25. ±1, ±2 24. ±1 37. -1 36. ±1,-2 35. 0,-6 34. 2,3,4,6 33. 5.7 ±3, ±1 32. ±3 31. 7,5,6 40. ±1/2, 2,3 39. ±1,6,0 38.