Systems of linear equations

1. Solve the system of equations:

    6x-4x-10y-14=-4x-134

    -6x-30y+5y-21=5y-261

2. Solve the system of equations:

    6x-30x-27x-18y-21z+12z-18=-30x-27x+12z-192

    18x-2x-16y+12z+6=-2x-324

    7x+x-x+10y-7z-8=x-x+33

3. Solve the system of equations:

    18x+3y-30y+12=-30y+102

    -7x-2y+4y+8=-7x+4y+20

4. Solve the system of equations:

    -270x+108y+324z-54=-2052

    -72x-63y+27z-12z-36=-12z-1098

    -6x-20y-7y+6z-14=-7y-254

5. Solve the system of equations:

    10x-6x-5x+5x+6y-10=-6x-5x+5x+6

    -8x+2y-8y-8=-8x-8y+4

Solutions

1. x=-5, y=9

2. x=-9, y=9, z=-2

3. x=6, y=-6

4. x=5, y=9, z=-5

5. x=-2, y=6

Systems of linear equations

6. Solve the system of equations:

   16x+10x-5x-6y+14=10x-5x+78

   10x-2x+8x-4y=-2x+8x+40

7. Solve the system of equations:

   -60x-54y-6z-30z+48=-30z+150

   42x-12y+36y-30z-30=36y-108

   -30x+27x+21y-12z+27=27x+504

8. Solve the system of equations:

   8x+8y-6y-12=-6y-92

   -6x-7x+36y-2y+6=-7x-2y-270

9. Solve the system of equations:

   -6x-15y-7y-6=-7y+114

   24x-24x-24y-15y-15y=-24x-15y-15y+24

10. Solve the system of equations:

    120x+10x-84y-24=10x+396

    -10x+3x-2x+18y+7y+12=3x-2x+7y+32

Solutions

6. x=4, y=0

7. x=-7, y=7, z=-10

8. x=-2, y=-8

9. x=-5, y=-6

10. x=7, y=5

Systems of linear equations

11. Solve the system of equations:

    15x+24y+21y+27z-21=21y+291

    20x-6y-18z+16z+10z+20=16z+10z+2

    -12x+3x-8y-16z-2z-32=3x-2z-164

12. Solve the system of equations:

    -8x-20x+4y+14z+9z-20=-20x+9z+54

    16x-20x+14y-16z-4z+10z+20=-20x-4z+10z+36

    -3x+4y-3y-2y+8y-3=-3y-2y+8y+50

13. Solve the system of equations:

    36x+42x+6y-12z+60=42x+78

    -18x+6x+9y+6z+24=6x-45

    27x+54y+10y-9z-36=27x+10y-297

14. Solve the system of equations:

    7x-3x+2y-10=-3x+39

    -20x+16y+8=-284

15. Solve the system of equations:

    14x-6x-14y+12z+6=-6x-186

    36x-12x-54y-3y+63z+63=-12x-3y-828

    -10x-9y+10y+8z+10z+2=10y+10z-124

Solutions

11. x=3, y=10, z=1

12. x=-7, y=8, z=-1

13. x=1, y=-5, z=-1

14. x=9, y=-7

15. x=0, y=6, z=-9

Systems of linear equations

16. Solve the system of equations:

    6x+7x-6x+9y-2y-4=7x-6x-2y-40

    10x+14y-6=-64

17. Solve the system of equations:

    -3x+6y+3z+21=3z+39

    -5x-4y+6z-7z-8=-7z-30

    x+8x+3y-y+z+6=8x-y+6

18. Solve the system of equations:

    -21x-12y-30z+21=-93

    -10x-10y+4z-4=104

    6x-2y-18y+6z+10=-18y+68

19. Solve the system of equations:

    15x+3y-27z-3z+15=-3z-219

    -40x+24y+32z-4z-4=-40x-4z-52

    30x-18y+3y+2y-9z+9=3y+2y-180

20. Solve the system of equations:

    -4x+8y+10z-6z+4=-6z+18

    -108x+126y+54z-54=1116

    -81x+27x+81x-72y+81z=27x+81x-738

Solutions

16. x=-3, y=-2

17. x=-2, y=2, z=-4

18. x=0, y=-8, z=7

19. x=-9, y=-6, z=3

20. x=-5, y=8, z=-7

Systems of linear equations

21. Solve the system of equations:

    3x-7y-6y+2=-7y-6y-1

    24x-48x+18x-54y-54=-48x+18x+408

22. Solve the system of equations:

    -288x-288y+54y+72z+108=54y+2412

    -6x-12y-10y-9z+6=-6x-10y+138

    -72x-9x-45y+54z+54=-9x+207

23. Solve the system of equations:

    56x=-280

    -54x+6y+60=300

24. Solve the system of equations:

    -27x-216=-351

    -36x-81y-45=18

25. Solve the system of equations:

    -24x-18x+6y+9y+18=-18x+9y-102

    4x+7x-24y+12=4x+7x-180

Solutions

21. x=-1, y=-9

22. x=-5, y=-5, z=-8

23. x=-5, y=-5

24. x=5, y=-3

25. x=7, y=8

Systems of linear equations

26.   Solve the system of equations:

-7x-10y-7y+4=-7x-7y-86

-6x-6y-4y+8y+5=-4y+8y-13

27.   Solve the system of equations:

-18x-15x+12y+48z+4z-60=-15x+4z+684

-3x-8x-10y+7z+5z+1=-8x+5z+31

6x+2x-2x-y+5y+3z+5z-5=2x-2x+5y+5z-42

28.   Solve the system of equations:

-20x-32y-32y+28=-32y+56

20x+16x-8y-8=16x-76

29.   Solve the system of equations:

-3x-7x-8x-4y-9y-9y+3=-7x-8x-9y-9y+4

27x-21x+6y-7y-12=-21x-7y+189

30.   Solve the system of equations:

6x+8y-6z-12=8y+36

-18x+16x+2x+6y+3y-6z-8=16x+2x+3y-188

-12x+24y-y-3=-y-159

Solutions

26. x=-6, y=9

27. x=-10, y=7, z=10

28. x=-3, y=1

29. x=9, y=-7

30. x=9, y=-2, z=1

Systems of linear equations

31. Solve the system of equations:

    -24x+30y-21z-z+18=-z+417

    -10x-x+2y+10y+4z-2=-x+10y+108

    2x-16y-7y+4z+16=-7y-132

32. Solve the system of equations:

    -27x+135y-81=-243

    10x+2y-8y+2y-4y+8=-8y+2y-4y+68

33. Solve the system of equations:

    18x+2x-10y-2z-10=2x-34

    -30x+18x+15x-48y-30z+21z+24=18x+15x+21z-420

    30x-10x-3y+8y+18z+27=-10x+8y+75

34. Solve the system of equations:

    -108x-28x+84y+24z+60=-28x+684

    24x+54y+12z-20z-30=-20z+354

    -4x+6x+5y-10y-10y-5z-7z+7=6x-10y-10y-7z+12

35. Solve the system of equations:

    -24x-60x-9x-42y-48=-60x-9x-348

    -6x+12y+27y-y-3=27y-y+57

Solutions

31. x=-8, y=9, z=3

32. x=6, y=0

33. x=3, y=8, z=-1

34. x=0, y=6, z=5

35. x=2, y=6

Systems of linear equations

36. Solve the system of equations:

9x+x+18y-3z+3=x-189

-54x+54y-54z=270

-6x-5x-24y+18y+24z+21=-5x+18y+81

37. Solve the system of equations:

30x+21x+6y+3y-3z+27=21x+3y+240

-10x+10y-10y+5y+8z+12=-10y+5y+28

x-7x+2z+10z=-7x+10z-1

38. Solve the system of equations:

-10x-4x-10y+8y+3z+9z-1=-4x+8y+9z-26

20x-3x-10y-16z-12=-3x-152

x+10x-4y+z-10z+4=10x-10z-40

39. Solve the system of equations:

6x+2x-x+7y=2x-x+68

54x-42x-126y-108y-90=-42x-108y-990

40. Solve the system of equations:

-4x+20x-14y-10y+16z+16z+14=20x-10y+16z+34

-7x-4x-3y-5y-5z-5z+6=-4x-5y-5z-22

-27x-6y-12z-30=-186

Solutions

36. x=-6, y=-9, z=-8

37. x=5, y=9, z=-3

38. x=-7, y=8, z=-5

39. x=2, y=8

40. x=8, y=-6, z=-2

Systems of linear equations

41. Solve the system of equations:

    -12x+6y-18=0

    -162x+90x-18y-9y+162=90x-9y+504

42. Solve the system of equations:

    -3x-9z+7=-32

    -36x+42z+12z+12z-36=12z+12z+96

    -6x+8x-4x-4x-7x-2y-2z+5=8x-4x-4x-7x-2y-9

43. Solve the system of equations:

    4x+8x+3y+10z+10z-6=8x+10z+27

    -40x+24y-28y+4z+40=-28y+88

    12x+8x-4y+2y-18z-10=8x+2y-2

44. Solve the system of equations:

    7x+x+y+3y-5=x+3y+40

    -27x-27x-18x-27y+3=-27x-18x-240

45. Solve the system of equations:

    -54x+36y+54=36

    -12x-3x+9x-15y-8y+15=-3x+9x-8y-81

Solutions

41. x=-2, y=-1

42. x=1, y=6, z=4

43. x=3, y=7, z=0

44. x=6, y=3

45. x=3, y=4

Systems of linear equations

46. Solve the system of equations:

    108x+54y+4y-144=4y-738

    -14x-2y+20y=20y+52

47. Solve the system of equations:

    54x-7x-18y+42=-7x+456

    -4x-8x-4y-14=-8x-2

48. Solve the system of equations:

    -108x+108y-60y-2y=-60y-2y+1188

    12x-14y+4y-2=4y-142

49. Solve the system of equations:

    63x-45y-9y-9=-9y-693

    -27x-27x-21y+21y+21=-27x+21y+153

50. Solve the system of equations:

    -72x-6x-96y-72z+120=-6x+264

    -16x+6x-20y+6y+14z+20z=6x+6y+20z+58

    -x+8x-5y-2z-1=8x-5y-2z-2

Solutions

46. x=-3, y=-5

47. x=5, y=-8

48. x=-7, y=4

49. x=-8, y=4

50. x=1, y=-3, z=1

Systems of linear equations

51. Solve the system of equations:

    48x+2x+54y-6y+30z+42=2x-6y-390

    9x+y-6z-3z+8=-3z+98

    36x-10x-24y-54z+12z-42=-10x+12z+786

52. Solve the system of equations:

    -56x-56y-80z-80=-112

    -15x-18y+24z+21z+6z-9=21z+6z-57

    -54x-144y-72z-126z-36z-54=-126z-36z+90

53. Solve the system of equations:

    4x+8x+6x-5x-16y-6y+14=8x+6x-5x-6y+42

    -18x+24x-6y+12=24x-114

54. Solve the system of equations:

    48y+120y+96=120y-48

    6x-12x+x+21y+12=-12x+x-27

55. Solve the system of equations:

    -4x-16y+8z+14=-54

    -18x+x-14z+18=x+84

    -18x-24y+12y+9y+24z-24=12y+9y-210

Solutions

51. x=4, y=-6, z=-10

52. x=4, y=-2, z=-1

53. x=7, y=0

54. x=4, y=-3

55. x=1, y=1, z=-6

Systems of linear equations

56. Solve the system of equations:

    42x-12x-54y+54z+60=-12x+1248

    2x+x+10x+10y-7y-2z+1=x+10x-7y-67

    -30x-6y+18y-8y+27z-30z-12=18y-8y-30z-24

57. Solve the system of equations:

    -4x-8x+8y+2z+16=-8x-32

    20x+18x+16y-14z+8=18x-64

    3x-18y+30y-15z+18=30y+6

58. Solve the system of equations:

    -20x+14y-3z-2=-3z-10

    -80x-2y-64z+8=-2y-856

    8x+6x+6y-8z-6z-2=6x-6z+46

59. Solve the system of equations:

    14x-2y-18z-12=-222

    42x+24x-16x-30y+6z-24z-6=24x-16x-24z-540

    6x-3y+2z+5z+1=5z-63

60. Solve the system of equations:

    4x-6x-4y-5y+3y+8=-6x-5y+3y+68

    30x-8x+30y-9=-8x-99

Solutions

56. x=9, y=-7, z=8

57. x=6, y=-5, z=8

58. x=6, y=8, z=6

59. x=-9, y=6, z=4

60. x=6, y=-9

Systems of linear equations

61. Solve the system of equations:

    20x-28y-12y+16z+32=20x-12y+16

    14x+4y-18z+16=186

    21x+30x+15y-24z+24=30x+219

62. Solve the system of equations:

    18x-63y+27z-36=675

    189x+108y-27z+9z+216=9z+270

    18x+27y-12y-9z+6z+15=-12y+6z-138

63. Solve the system of equations:

    -12x+6x-2y+4z+9z+6=6x+9z+70

    -9x+7x+9x+2y+9y+9z+8=7x+9x+9y+57

    24x+30y+21z-6z+24=-6z-81

64. Solve the system of equations:

    -20x-4x+8y-18z-4z-20=-4x-4z+48

    -16x-18y+6y+20=6y+172

    36x+18y-72z+24z-63=24z-315

65. Solve the system of equations:

    -21y+6y-8y+18=6y-8y+102

    6x-12y-6=18

Solutions

61. x=3, y=-4, z=-8

62. x=5, y=-6, z=9

63. x=-6, y=2, z=-1

64. x=-5, y=-4, z=0

65. x=-4, y=-4

Systems of linear equations

66. Solve the system of equations:

$5x-2x+18y-3y-21z+30=5x-2x-3y-186$

$8x+3x-3y+7z-10z-10=3x-10z+103$

$-54x-6x-72y+90=-6x+72$

67. Solve the system of equations:

$4x-4y-4y-24=-4y+40$

$-12x-30y+15=201$

68. Solve the system of equations:

$3x-7x-21y-21y+4y+15=-7x-21y+4y+246$

$4y-8y-6y+5z+2=-8y-6y-13$

$7x+7y-y-z+9=-y-17$

69. Solve the system of equations:

$-81x-5x+27y-9y-36y-54=-5x-9y-36y-378$

$-3x+12y-27=12y-33$

70. Solve the system of equations:

$6x+54y-60z-6=168$

$108x+63x+9x-162y-243z-189=63x+9x+2754$

$-8x-7x-5y-5z-6z+9=-7x-6z+37$

Solutions

66. x=7, y=-5, z=6

67. x=7, y=-9

68. x=7, y=-10, z=5

69. x=2, y=-6

70. x=4, y=-5, z=-7

Systems of linear equations

71. Solve the system of equations:

    6y+2y+7y+4y+5z+7=2y+7y+4y+13

    8x+2y+y-8z-2z-20=y-2z+24

    15x+24x+12y-3z-12=24x+48

72. Solve the system of equations:

    -20x+18y-8z+6=270

    20x+16y-12z-6z+20=-6z+100

    -18x+15y+6y-30z-18=6y+372

73. Solve the system of equations:

    243x-135y+135=405

    -486y+108=1080

74. Solve the system of equations:

    6x+3y+9z-12=0

    3x+8x-4x+8y-10z-5=8x-4x-28

    -36x-60y-54z+24=-48

75. Solve the system of equations:

    -12x-54y-30z+54=486

    -14x-16y-10y-3y-6z+4=-10y-3y+200

    18x+3y-24z-27z-18=-27z+33

Solutions

71. x=-2, y=6, z=-6

72. x=-5, y=6, z=-7

73. x=0, y=-2

74. x=-1, y=0, z=2

75. x=-9, y=-1, z=-9

Systems of linear equations

76. Solve the system of equations:

-54x-42x+54y+12y+54y-6z+54=-42x+12y+54y+324

-12x-48y+24y+y+24z-9z-36=24y+y-9z-216

-18x+6x-12y-8z-20=6x-50

77. Solve the system of equations:

-18x+30y+7z-15=7z+207

6x+6x+8x-3y+30z-15=6x+8x-33

45x+9y+90y+2y-36z+90=90y+2y+207

78. Solve the system of equations:

9x+6x-12y+2y-21=6x+2y-84

-24x-5x-3y-27=-5x-174

79. Solve the system of equations:

-6x-21y+27=9

10x-9y+3y+2=3y+32

80. Solve the system of equations:

-18x-2x+2y-6=-2x-106

-12x-60y=240

Solutions

76. x=-1, y=4, z=0

77. x=1, y=8, z=0

78. x=5, y=9

79. x=3, y=0

80. x=5, y=-5

Systems of linear equations

81. Solve the system of equations:

   42x-9x+6y-12z+6=-9x+216

   40x+16y-40z-4z+24=-4z+40

   10x+9y+y-9z=y-11

82. Solve the system of equations:

   -21x-24x+12x+27y+18=-24x+12x-39

   -2x+7x+y+8y+3=7x+8y+7

83. Solve the system of equations:

   90x-180y+3y-126=3y+234

   -9x-18x+15x-12y+30=-18x+15x-36

84. Solve the system of equations:

   12x-30y-20y+6=-20y-156

   8x+14x-12y-6y+16=14x-6y-52

85. Solve the system of equations:

   12x+10x+20y-6y-18z-6=10x-6y+46

   9x-27x+21y+21y+15y-24y+21=-27x+21y+15y-24y-135

   54x-18y-126z-72z=-72z+1764

Solutions

81. x=7, y=-4, z=5

82. x=-5, y=-6

83. x=6, y=1

84. x=-1, y=5

85. x=6, y=-10, z=-10

Systems of linear equations

86. Solve the system of equations:

   -12x+14y+4y+12=4y+132

   -60x+12x-42y+30y+30=12x+30y-42

87. Solve the system of equations:

   8x+20y+3y+2z+7z+12=3y+7z+100

   4x-3x-6y-8y+y-5z-10z+9z-6=-3x-8y+y-10z+9z-58

   -9x+6y+3y-8y+15z-27=3y-8y+45

88. Solve the system of equations:

   10x-9x+2y-5z-5z-7=-9x-5z-43

   -45x+54x+54y-90z+9=54x-1233

   -36x-12y-20z-14z-10z-8=-14z-10z-144

89. Solve the system of equations:

   5x+x+3x-2y+9y-6=x+3x+9y-8

   4x+2x-10y-5y+5y=2x-5y+5y+32

90. Solve the system of equations:

   -12x+2y-14z-14=98

   -9x+9y-15z-21z+30=-21z+75

   -30x+3x+12y-3z-18=3x+117

Solutions

86. x=-3, y=6

87. x=-4, y=6, z=0

88. x=2, y=-8, z=8

89. x=-2, y=-4

90. x=-7, y=-7, z=-3

Systems of linear equations

91. Solve the system of equations:

   36x+9x+2x+6y+18=9x+2x-96

   -10x-2x-18x-6y-14=-2x-18x-4

92. Solve the system of equations:

   -4x-5y+y-8z-3=y+15

   -16x-4y+32=104

   6x+8x+6y-z+7z-2=8x+7z+1

93. Solve the system of equations:

   9x-3x-24y+4y-12z-5z-27=-3x+4y-5z-174

   -7x+6x+2y+7y-10z+8z-7=6x+7y+8z-128

   -12x+32y-20z-2z+8=32y-2z-240

94. Solve the system of equations:

   -63x+72y-90=-954

   -5x+3y+2y-2y+10=2y-2y-45

95. Solve the system of equations:

   16x+4x-20y+10z+7z-20=4x+7z-146

   36x-30y-10y-42z-54=-10y-84

   24x-12y-42y+6z-42z+24=-42y-42z-66

Solutions

91. x=-4, y=5

92. x=-6, y=6, z=-3

93. x=9, y=6, z=7

94. x=8, y=-5

95. x=-1, y=4, z=-3

Systems of linear equations

96. Solve the system of equations:

   -4x+3x+6y+18z+10z-8=3x+10z-70

   54x-90y-72y-45z+63=-72y-315

   3x+y+2z+7z-10=7z-40

97. Solve the system of equations:

   -30x-36y+18z-54=456

   -27x-54y+36z+72z-27=72z+657

   -3x-6y+21y+9y-27z-24z-8z+6=21y+9y-24z-8z-135

98. Solve the system of equations:

   18x+36y-15y+42z-42=-15y+378

   -126x-2x+126y+126y-72z+126=-2x+126y-36

   10x-5x+7y+9y-7z+7=-5x+9y+54

99. Solve the system of equations:

   -180x-72y-180=252

   270x+x+135y-135=x-945

100. Solve the system of equations:

   -14x-8x-2y+4y+10y+2=-8x+4y+10y+8

   -24x-3=-3

Solutions

96. x=-7, y=3, z=-6

97. x=-8, y=-4, z=7

98. x=4, y=5, z=4

99. x=0, y=-6

100. x=0, y=-3

Systems of linear equations

101. Solve the system of equations:

12x+54y+54y-3y+54=54y-3y-132

9x+6x+2y-3y+5y-9=6x-3y+5y-33

102. Solve the system of equations:

-14x-2x-20y-2y+12z+6=-2x-2y-130

60x-30y-24z-48z-2z+48=-48z-2z-444

36x+21x+54y+48y+24z+42=21x+48y+582

103. Solve the system of equations:

6x+6y+10y+6y-8z-8=10y+6y+102

288x-216y+252z-216=-792

8x+y-2y+9y+2z+2=-2y+9y+29

104. Solve the system of equations:

-84x-96y-108=-576

6x+7x-5x-18y-24y-6=7x-5x-24y-72

105. Solve the system of equations:

4x-18y-36=4x-144

7x=28

Solutions

101. x=-2, y=-3

102. x=-2, y=10, z=3

103. x=6, y=-1, z=-10

104. x=1, y=4

105. x=4, y=6

Systems of linear equations

106. Solve the system of equations:

15x+7x+3y+12z-12=7x+156

-10x-9y+2y-9z-8=2y-164

-8x+10y-3z+8z-4=8z-5

107. Solve the system of equations:

8x+5y-4y-6z+4z+10=-4y+4z+109

21x+30y-3y+21z-5z+4z-4z-6=-3y-5z+4z-4z+369

24x+x-9y-27z+27z-z-24=x+27z-z+66

108. Solve the system of equations:

8x+2y+3y+6y+18z+20z+18=3y+6y+20z-20

-21x-10x+18y-6z+15=-10x+195

-x+3y+7z+2z+7z-7=2z+7z+2

109. Solve the system of equations:

-6x-4x+x-14y+16=-4x+x-30

12x+2y+2=42

110. Solve the system of equations:

-7x+7y+8z+8=-158

-12x+9y+21y+6y-8y-3z+27=21y+6y-8y-150

-2x-4x-4y-2z-4z-2=-4x-4z+20

Solutions

106. x=3, y=5, z=9

107. x=6, y=9, z=-1

108. x=-2, y=7, z=-2

109. x=3, y=2

110. x=10, y=-8, z=-5

Systems of linear equations

111.   Solve the system of equations:

24x+21y+21z-30=159

-18x+30y-24z-18=-18

15x+6y+3z+27=66

112.   Solve the system of equations:

-7x-y+7y-y+y+8=7y-y+y+5

-144x-18y-36y+162=-36y+108

113.   Solve the system of equations:

30x-12x-12y-60z+48z+36=-12x+48z+114

3x-5x+5y-8z+4z+2=-5x+4z+10

-30x-3y-21z-9z+5z+6z+18=-9z+5z+6z-318

114.   Solve the system of equations:

-8x-x-4y-3y-2z+1=-x-3y+51

-6x-3x-6y+4y+4z+8z+8=-3x+4y+8z

-9x+9y+3z-8=103

115.   Solve the system of equations:

24x+6x-18x-4x-12y-18=6x-18x-4x-150

-24x-40y-2y-4=-2y+388

Solutions

111. x=0, y=4, z=5

112. x=0, y=3

113. x=9, y=1, z=3

114. x=-8, y=6, z=-5

115. x=-8, y=-5

Systems of linear equations

116. Solve the system of equations:

-90x-72y-90z-126=-306

-12x-9x+2y+16z-12=-9x+72

-3x-9y+3z-9z-15=-9z+93

117. Solve the system of equations:

-9x+24y+24y+21z+9z+15=24y+9z-267

12x-16x+20y+4z+8=-16x-44

-8x-4y+5y+4y-7z-7=5y+4y-29

118. Solve the system of equations:

6x+4x-2y-2y-3y-7=4x-2y-3y+27

7x-9x-9y+1=-9x+54

119. Solve the system of equations:

-4x+6y-9=-35

-2x+5y-3=-2x-18

120. Solve the system of equations:

-36x-72x+18y-90z-90z+81=-72x-90z+333

-6x-12y-4z+6z-20z+6z-12=6z-20z+6z-112

16x-32y+36z=-296

Solutions

116. x=2, y=-10, z=8

117. x=8, y=-7, z=-2

118. x=5, y=-2

119. x=2, y=-3

120. x=2, y=8, z=-2

Systems of linear equations

121. Solve the system of equations:

$-8x-y-4y-1=-4y-55$

$15x+8x-27y+9y+3y-12=8x+9y+3y+378$

122. Solve the system of equations:

$15x+15y+3y-21z+21=3y-21z+156$

$-30x-6y+y+6z+6z+21=y+6z-237$

$4x+18y-2z+10z-18=10z+36$

123. Solve the system of equations:

$-9x+63y+3y-8z=3y-8z+450$

$-4x-20x-2x+16y+14z-9z+2=-20x-2x-9z+92$

$-2x+10y-y-7z+10z+7=-y+10z+82$

124. Solve the system of equations:

$144x-8x+36y-10y-180=-8x-10y-1620$

$-16x+12x-16y-4y-18=12x-4y+190$

125. Solve the system of equations:

$-3x+7x-8x-2y-4=7x-8x-22$

$-16x+12x-3x-18y-18y+14=12x-3x-18y-60$

Solutions

121. x=8, y=-10

122. x=8, y=1, z=-2

123. x=6, y=8, z=-1

124. x=-9, y=-4

125. x=8, y=-3

Systems of linear equations

126. Solve the system of equations:

6x-2x+6x-6y-12=-2x+6x-6

24x-18=78

127. Solve the system of equations:

9x+7y-5z+8z-4z+8z+2=8z-4z+8z+56

-6x+10x-3y-27z+3z-6=10x+3z-123

30x-3z+9z-15z+3=9z-15z+84

128. Solve the system of equations:

-9x-6x-5y+10z-3=-6x-35

2x+2x-9x-7y-4z-2=2x-9x-20

-60x+48y-2y+18=-2y-366

129. Solve the system of equations:

6x+9y-6y-7y-5=-6y-7y+4

-20x-4x+10y-2=-4x+88

130. Solve the system of equations:

6x-3y+3z-9z+24=-9z-18

-6x+6x+9y-27y-27z-6z+6z-18=6x-27y-6z+6z+54

8x+36x-4y+12z-16=36x-64

Solutions

126. x=4, y=3

127. x=3, y=6, z=3

128. x=8, y=2, z=5

129. x=-3, y=3

130. x=-3, y=9, z=1

Systems of linear equations

131. Solve the system of equations:

-6x+8x+2y+18z-10=8x+2y-118

10x-4y+10z-6z-5z+2=-6z-5z+26

18x+14y-18y-14z-4z-12z+12z-20=-18y-4z-12z+12z+310

132. Solve the system of equations:

-14x+18y-16=26

-12x+6x-18y+2y+6y+2y-6=6x+2y+6y+2y-204

133. Solve the system of equations:

-27x-30y-15z-24=-438

-14x-x-4y-4z-4z+10=-x-4z-120

-28y+10y-12z+12=10y-196

134. Solve the system of equations:

-4x-6x+4y-20z-6=-6x+230

5x-9x-3y+4z-1=-9x-110

4x-8y-9y+9z-4=-9y-188

135. Solve the system of equations:

-24x-18x+18y-3z-3z-27=-18x-3z+36

2x-7y+5z+6z-3=6z+12

30x+12x-36y-24z-54=12x+114

Solutions

131. x=9, y=9, z=-3

132. x=6, y=7

133. x=7, y=7, z=1

134. x=-10, y=9, z=-8

135. x=-8, y=-8, z=-5

Systems of linear equations

136. Solve the system of equations:

   36y-20y-24=-20y-348

   -81x+18y=243

137. Solve the system of equations:

   20x-14x-16y+4z-24=-14x

   24x-54y+36z+6=246

   -5x-6x-4x-9x-2y-3z+2=-6x-4x-9x-34

138. Solve the system of equations:

   -9x+15x-18y+5y+45=15x+5y-72

   -4x+4y-18=26

139. Solve the system of equations:

   -2x-5x-5y+3y-1=-5x+3y+47

   12x+60x-6y+48=60x-24

140. Solve the system of equations:

   12x-20x-18y-14=-20x-14

   -24x-21x-6y+9=-21x+9

Solutions

136. x=-5, y=-9

137. x=1, y=2, z=9

138. x=-3, y=8

139. x=-9, y=-6

140. x=0, y=0

Systems of linear equations

141. Solve the system of equations:

   8x-8x-2y+2y-6y-2=-8x+2y-6y+50

   -12x-60y+6y-12=6y-720

142. Solve the system of equations:

   -27x+270y+45y-135z-81=45y

   -90x+63y+2z+63=2z+585

   5x-4x+9y-7z+4z-7=-4x+4z-42

143. Solve the system of equations:

   -10x+12y+10z+10z+12=10z+8

   -18x-12y-10y-6z+2=-10y+134

   12x-10x+40y-4z-20z+12=-10x-20z-116

144. Solve the system of equations:

   -14x-5x-2y+12y+4=-5x+12y+88

   21x-15y+4y+18z+21z-21=4y+21z-3

   36x+15y-3y-90z-27=15y-3y-297

145. Solve the system of equations:

   84x-4x-48y+60=-4x+684

   9y-6y+7y+5=-6y+7y-49

Solutions

141. x=9, y=10

142. x=-3, y=4, z=8

143. x=-5, y=-2, z=-3

144. x=-5, y=-7, z=1

145. x=4, y=-6

Systems of linear equations

146.   Solve the system of equations:

-18x+4x+8x+10y-4=4x+8x-108

-14x+12x+18y-20y+18y-6y-20=12x-20y+18y-6y-152

147.   Solve the system of equations:

-3x+8x+6y-3z+10=8x+73

5x+9x-6x-9x-4y+7y+4z+5=9x-6x-9x+7y-68

30x+21y+3z-6=-177

148.   Solve the system of equations:

24x+12y+30y+30=30y+162

6x-6x+6y+7y-5y+5=-6x+7y-5y+53

149.   Solve the system of equations:

-3x-8x+6x+8y+7y+1=-8x+6x+7y+66

9x+7x+7x+3x+3x-9y-6=7x+7x+3x+3x-96

150.   Solve the system of equations:

-12x-8x+7x+9y-30=-8x+7x-30

6x+20x+6y-16y+20=20x-16y+62

Solutions

146. x=3, y=-5

147. x=-9, y=5, z=-2

148. x=3, y=5

149. x=-3, y=7

150. x=3, y=4

Systems of linear equations

151. Solve the system of equations:

10x+18x+12y+5y-12=18x+5y-108

3x+24y-21y-9=-21y-99

152. Solve the system of equations:

12x-54x-8x-60y+20y-42z+6=-54x-8x+20y-354

-8x+10y+8y+7z+8=8y+110

6x-x+6y-6z+4z-21=-x+4z-15

153. Solve the system of equations:

-3x+6y-6=-3x-24

9x+18x-3x+15x+12y+12y=18x-3x+15x+12y-90

154. Solve the system of equations:

-16x-8x+20y-2z-10=-8x-104

20x+4y-8z+40z+8=40z-104

-9x+7y+6z+10=-26

155. Solve the system of equations:

5x+4x-2y-z=4x-11

4x-10y+9z+6z+4=9z+6z-18

5x-x-3x-10y+6y-4z+5z+3z-9=-x-3x+6y+5z+3z-10

Solutions

151. x=-6, y=-3

152. x=-7, y=6, z=-2

153. x=-6, y=-3

154. x=-5, y=-9, z=-3

155. x=-3, y=1, z=-6

Systems of linear equations

156. Solve the system of equations:

    10x-16x+4y-14z-18=-16x+22

    -60x+30x-60y+54z-6z-30=30x-6z-516

    -9x-10y-6y+4y-2y-5=-6y+4y-2y-92

157. Solve the system of equations:

    4x+20x-2=20x+34

    -27x+18y-18=-99

158. Solve the system of equations:

    -24x+48y-8y+42z+18=-8y-108

    20x+4y+12z-20=-188

    -12x+3x+4x+48y+42z-2z+24=3x+4x-2z-174

159. Solve the system of equations:

    -7x-2x-10y-10y-4=-2x-10y+14

    3x+42y-6=3x+36

160. Solve the system of equations:

    -12x-2x-18y+3y+8=-2x+3y-190

    -27x+30x-24y+9=30x-321

Solutions

156. x=3, y=6, z=1

157. x=9, y=9

158. x=-6, y=-3, z=-3

159. x=-4, y=1

160. x=6, y=7

Systems of linear equations

161.   Solve the system of equations:

36x-12y-2y-28=-12y-2y-352

-27x+18y-30y+15=-27x-30y-75

162.   Solve the system of equations:

-4x+8x-4x+4y+16=8x-4x+20

-2x+14x-4y+2=14x-20

163.   Solve the system of equations:

30x-30x+36x+30y+60y-18=-30x+36x+60y+102

-60x+30y-4y-60=-4y-210

164.   Solve the system of equations:

14x-7x-16y+8z-16=-7x-302

15x+18y-15z-7z-10z+12=-7z-10z+222

-20x+x+20y-4y+2z-14=x-4y+272

165.   Solve the system of equations:

-2x-6x+7y-2y-z+1=-6x-2y-40

21x+30y+30z+12z+3z-15=12z+3z-594

-8x+2y-10y-9z+10=-10y+100

Solutions

161.   x=-9, y=-5

162.   x=3, y=4

163.   x=3, y=1

164.   x=-5, y=10, z=-7

165.   x=-9, y=-9, z=-4

Systems of linear equations

166. Solve the system of equations:

-12x+18y+15z+12z-30=12z-126

6x-12y+27y+27z-24z=27y-24z+6

-16x-16y+12z-18=-16x+102

167. Solve the system of equations:

36x-8y+4y-6y=4y-6y-284

-20x+36x-32x+24y+8=36x-32x+244

168. Solve the system of equations:

-20x+36y+24z+16=196

12x-6y-24z-24z+18=-24z-72

-4x-16y+12y-36z+32=12y-124

169. Solve the system of equations:

-144x-108y-72z=-324

-24x-20x+20z-8=-20x-24

-x-3x+5y-4y-3y+4y+6z+2=-3x-4y-3y+4y-3

170. Solve the system of equations:

-12x+8y-6y-14=-6y-102

20y+20z+20=-140

14x-6x-14y-14z-3z-2=-6x-3z+138

Solutions

166. x=-8, y=-9, z=-2

167. x=-7, y=4

168. x=0, y=3, z=3

169. x=4, y=-5, z=4

170. x=2, y=-8, z=0

Systems of linear equations

171. Solve the system of equations:

   -3x+9y+8y-6y+8=8y-6y+8

   -3x+12x+6y+y-9=12x+y-9

172. Solve the system of equations:

   -18x+45y+30y-10y+9z-45z-81=30y-10y-45z-261

   4x+4x-28y+16z-8z=4x-8z+220

   18x-3y-7y-30z-12=-7y-168

173. Solve the system of equations:

   24x+8x+42y+9y+12z+24=8x+9y+396

   -30x+3y-8y+18z+6=-8y-138

   -60x+84y+60y+108z-96=60y+144

174. Solve the system of equations:

   27x-10x-x+18z+z+6=-10x-x+z+267

   3x-24y+4y+9y-3z+12=4y+9y+135

   27x-8x-18y-30y-12z+3=27x-8x-30y-9

175. Solve the system of equations:

   -45x-63y+27y-12y+90=27y-12y+837

   32x+32y-2y+18y+5y+40=-2y+18y+5y-376

Solutions

171. x=0, y=0

172. x=-3, y=-6, z=4

173. x=7, y=4, z=3

174. x=3, y=-6, z=10

175. x=-4, y=-9

Systems of linear equations

176.   Solve the system of equations:

16x+18y+8y+16=8y+174

9x-2x-6x-2x-9=-2x-6x-2x+9

177.   Solve the system of equations:

-9x-5y-3y=-3y-106

-9x+2y+y+6=-9x+y+16

178.   Solve the system of equations:

18x-10x-6y+24z-18=-10x-156

3x-15y-27z-24z+24=-24z+150

4x-28y-36z+24=224

179.   Solve the system of equations:

30x+9y+3y-18y-6y+3=3y-18y-6y+90

216x+270y-24y-27=-24y+1215

180.   Solve the system of equations:

24x+54y-9y+36z-18=-9y+78

21x+18y-y+12z+6=-y+51

12x-24y+24z-6=-186

Solutions

176. x=2, y=7

177. x=9, y=5

178. x=-5, y=-4, z=-3

179. x=2, y=3

180. x=1, y=4, z=-4

Systems of linear equations

181.   Solve the system of equations:

60x-60y-12z-54=582

2x+10y+5z+5z-6=5z-64

36x+8x+42y-14y+42z+30=8x-14y-216

182.   Solve the system of equations:

7x-3x+2x+7x-9y-7y+8z-3z-10=-3x+2x+7x-7y-3z-111

-2x+9x+8y+3z+4=9x+3z+34

-8x+2y-3y+4y+16z+8=-3y+4y-136

183.   Solve the system of equations:

-10x+7y-2y-7z+2=-2y-12

27x-9y-27z+5z+4z+12=-9y+5z+4z+120

21x-12x-6y-18y-27z+21=-12x-18y+165

184.   Solve the system of equations:

-9x-27y+81y+27z+18=81y+324

24x+20y-12z-24=-92

-20x+10x-20y+20z-8=10x+152

185.   Solve the system of equations:

-48x+60y-18=60y-402

7x-4x-3x+2y-1=-4x-3x+55

Solutions

181. x=6, y=-3, z=-8

182. x=1, y=4, z=-9

183. x=0, y=-6, z=-4

184. x=5, y=-4, z=9

185. x=8, y=0

Systems of linear equations

186. Solve the system of equations:

-6x-6y+10y-z-9z-9z+9=10y-9z-9z-15

4x-14x-4y-18z-10=-14x-82

9x+10x-10y-4z+2z+4=10x+2z+64

187. Solve the system of equations:

-54y+162z-16z-126=-16z+1386

6x+12y+12y+6y+8y+18z+2=12y+6y+8y+122

9y+5y+4z+8=5y+4

188. Solve the system of equations:

-6x-6x+10y+24z-24z-24=-6x+10y-24z+18

30x+24y-9y-9y+27z-21z-6=-9y-9y-21z

12x+7x-16y-4y-16z-10z+20=7x-4y-10z-208

189. Solve the system of equations:

-12x+54y+24=468

-120x-36y+108=-60

190. Solve the system of equations:

9x+4x-6x-2y-10y-3=4x-6x-2y-10y-57

54x-42y+60=-96

Solutions

186. x=6, y=-3, z=6

187. x=4, y=-4, z=8

188. x=-7, y=9, z=0

189. x=-1, y=8

190. x=-6, y=-4

Systems of linear equations

191. Solve the system of equations:

-18x+9y+y+9z-18=y-117

6x+x-6y-27z+24=x+60

-54x-7x-18y+42z-6z-42=-7x-6z-294

192. Solve the system of equations:

-16x-18y+10z+8z+2=8z-86

-4x-2x-4y-4z+5z-10z+1=-2x+5z-10z+29

-10x-8y-18z+14z-2=14z+142

193. Solve the system of equations:

18x-10x+8y-18y+16z-20=-10x-18y+280

-4x+x-8y-3z-6=x-101

60x-8x+108y-84z-36=-8x+684

194. Solve the system of equations:

3x-8x-8y-y-10=-8x-y+43

14x+14x+14y+4=14x-262

195. Solve the system of equations:

-54x-48y-10y+24=-10y+294

180x+216y-216=-1116

Solutions

191. x=5, y=-1, z=0

192. x=-9, y=9, z=-7

193. x=10, y=5, z=5

194. x=-9, y=-10

195. x=-5, y=0

Systems of linear equations

196.   Solve the system of equations:

10x+6y-6y=-6y-4

12x-24x-12y+21y-12=-24x+21y+156

197.   Solve the system of equations:

9x+7x+5x+10y+2y-2y+7z+1=7x+5x+2y-2y+12

-8x-10y+5z-6z-1=-6z-50

-27x+18x+5x-21y-6z+27=18x+5x-6

198.   Solve the system of equations:

4y+28y+28z-32=28y-48

-6x+24y+18y+42z+12=18y-78

-10x-9y-5z-3=43

199.   Solve the system of equations:

48x+36y+24z-36z-60=-36z

4x+8y+4y-4z+7z-3z+2=4y+7z-3z-58

20x+6x+2y-14z+20=6x+16

200.   Solve the system of equations:

12x+10x-24y+48z+5z-24=10x+5z+396

30x+3x+12y+3y-36z-24=3x+3y-90

9x-6y-9y+2z+8=-9y+65

Solutions

196. x=5, y=-9

197. x=-2, y=5, z=-3

198. x=-1, y=-4, z=0

199. x=4, y=-7, z=5

200. x=7, y=4, z=9

Systems of linear equations

201. Solve the system of equations:

-81x+54y+18z-27=-99

-10x+8y+6y-3z+9z-2=6y+9z+31

-5x+2x-x+8y-2z+7z-7=2x-x+7z+29

202. Solve the system of equations:

64x+8y-8z-80=-520

-3x-4x-2y+3z-7=-4x+17

-3x-3y+7z+4=42

203. Solve the system of equations:

-2x-18x+5x+4x-9x-2y-4=-18x+5x+4x-9x-2

18x-30y-48=-402

204. Solve the system of equations:

9x-24y+7y+9z+4z-12=7y+4z+6

9x+x+6x+9x-6x-8y-8z+2=x+6x+9x-6x-8

84x+9x-72y+84y+84z-120=9x+84y-864

205. Solve the system of equations:

4x-4x-16y+20z-20=-4x-96

4x-5y-4y-4z+4=-4y-45

24x+4y+20z-40=104

Solutions

201. x=2, y=4, z=-7

202. x=-7, y=6, z=5

203. x=-8, y=7

204. x=-10, y=-6, z=-4

205. x=2, y=9, z=3

Systems of linear equations

206. Solve the system of equations:

$$27x+30y-15=-12$$

$$24x-12y+108y-72=108y+240$$

207. Solve the system of equations:

$$6x+10x-18y-10y-9y+16=10x-10y-9y-128$$

$$-6x+6y-30y-3=-30y+33$$

208. Solve the system of equations:

$$-6x-3x-8x-5y+8z+6=-3x-8x+107$$

$$-10x-6x-20y+18z-20=-6x+216$$

$$36x-12x+360y+216z-108=-12x+144$$

209. Solve the system of equations:

$$3x+2y+6z-4=48$$

$$12x+48y-8y+24z+18=-8y+546$$

$$-42x+16x+12y-30z+24z=16x+24z+78$$

210. Solve the system of equations:

$$36x+36y-20y-7y-8z-20=-20y-7y-380$$

$$16x-16y+12y-5y-2z-10=12y-5y-138$$

$$-9x+9x-10y+8y+7z+8z-8=9x+8y+8z+83$$

Solutions

206. x=9, y=-8

207. x=3, y=9

208. x=-5, y=-3, z=7

209. x=-6, y=8, z=9

210. x=-9, y=-1, z=0

Systems of linear equations

211. Solve the system of equations:

    20x+18y+4y+6=4y-78

    -3x-27y+2y+2y+3=2y+2y+210

212. Solve the system of equations:

    -2x+8x+3x-6y+y-3z+8=8x+3x+y-20

    -4x+8x-9y+6y-9z-6z+4=8x+6y-6z-40

    -30x+48y-54z-48=342

213. Solve the system of equations:

    -24x+3y+30y+3z-10z-6z+30=30y-10z-6z-228

    6x-54y-54z-2z-18=-2z+792

    216x+162y+108y+189z-54z+135=108y-54z-351

214. Solve the system of equations:

    -72x-36y+108=432

    18x-2x+10x+18y-2y-8=-2x+10x-2y-44

215. Solve the system of equations:

    -144x-162y-54y-54=-54y+1098

    -2x-5x+6y+4y-6=-5x+4y-56

Solutions

211. x=3, y=-8

212. x=-7, y=6, z=2

213. x=9, y=-8, z=-6

214. x=-7, y=5

215. x=1, y=-8

Systems of linear equations

216. Solve the system of equations:

-27x-6x+6y-3=-6x-279

42x+12y+30=438

217. Solve the system of equations:

-9x+6x+24y-30y-18y-18=6x-30y-18y+30

6x+5x+9y-9=5x+84

218. Solve the system of equations:

10x-4x-6x+4y-3y+5=-4x-6x+4y-3y+35

12x+9y+24y-27=24y-81

219. Solve the system of equations:

9x+6x-4x+y+8=6x-4x+68

5x-10y+7y-3=7y+62

220. Solve the system of equations:

-60x-5x-60y+18y-48=-5x+18y+432

14x-16x+16y-6y-18=-16x-6y-126

Solutions

216.   x=10, y=-1

217.   x=8, y=5

218.   x=3, y=-10

219.   x=7, y=-3

220.   x=-10, y=2

Systems of linear equations

221. Solve the system of equations:

-16x-8y+8y+20z-7z+18=8y-7z+158

12x+36y+20z-12z-8=-12z+172

48x-42y+48z+24z+48=24z+666

222. Solve the system of equations:

-270x+54y+324=2322

-14x-4x+8y+4y+4=-4x+4y+118

223. Solve the system of equations:

-5x-7x-y-9y-1=-5x-7x-9y+6

4x+3x+2x-4y+y-9=3x+2x+y+47

224. Solve the system of equations:

-4x-8x+9y+10y+5z-8=-8x+10y-57

-2x-4y-4z-3z+6=-3z+76

-12x+6y-24=54

225. Solve the system of equations:

16x+3x+10x+4y+9y+8=3x+10x+9y+64

16x-12x+24y+20y-40=-12x+20y-184

Solutions

221. x=3, y=-1, z=9

222. x=-7, y=2

223. x=7, y=-7

224. x=-9, y=-5, z=-8

225. x=6, y=-10

Systems of linear equations

226. Solve the system of equations:

-16x-12x-16y-20=-12x+12

2x+6y+2y+9=2y-27

227. Solve the system of equations:

12x+20x+14y+16=20x+70

6x-10x-3y+8y-6y-9=-10x+8y-6y+48

228. Solve the system of equations:

-96x-120y=-72

-3x-21x-9y+21y+81=-3x-21x+21y+18

229. Solve the system of equations:

2x+5x+4=5x+10

84x+12y-12=276

230. Solve the system of equations:

14x-16x-18y-12z+12z+20=-16x+12z+86

-36x-6x-42y-36z+60=-6x+666

-9x-24y-6z+15z+3z=15z+3z+204

Solutions

226. x=6, y=-8

227. x=8, y=-3

228. x=-8, y=7

229. x=3, y=3

230. x=-6, y=-5, z=-5

Systems of linear equations

231. Solve the system of equations:

-18x-18y+y-12z+9z+8z+15=y+9z+8z-153

9x+6x+27y-9z+12=6x-9z+264

567x+486y+270y+162z-567=270y+4212

232. Solve the system of equations:

8x+8y-6y-7y-2=-6y-7y-2

-12x-18y-8y+16=-8y+10

233. Solve the system of equations:

252x-360y-324=-3168

-42x-15x-3x-3x-18y+24z+12=-15x-3x-3x-366

-15x+21y+3z-5z+15=-5z+171

234. Solve the system of equations:

-9x+3x+27y+y-15z+6=3x+y-18

-54x+36y+4y-48z+18z+36z-54=4y+18z+36z+96

18x+3y+24z-3=-153

235. Solve the system of equations:

12x-21y+8y+2y+27z-9=8y+2y+165

5x-9y-y+10y-4y-5y-5z-6z+6=-y+10y-4y-5y-6z-53

-4x-9y-9y-4z-4z+7=-9y-4z-107

Solutions

231.   x=1, y=9, z=-1

232.   x=-1, y=1

233.   x=3, y=10, z=-3

234.   x=-1, y=-4, z=-5

235.   x=7, y=6, z=8

Systems of linear equations

236. Solve the system of equations:

18x-45x-81y+30y+72z+5z+27=-45x+30y+5z-261

4x-4y+9y-10z-14=9y-172

-6x+54y+24z+12=810

237. Solve the system of equations:

4x-y+y-2z+10=y-23

-2x+10x+5y+9y-7z+2=10x+9y-8

81y+36z-72=351

238. Solve the system of equations:

162x+54y-18z-108=-2070

-5x+4x+x+3x+7y-9z-5=4x+x+3x-92

-30x+12y+27y+15z+27=27y+375

239. Solve the system of equations:

3x-30x-15x-12x+24y+18y-21=-30x-15x-12x+18y-210

10x+18y+9y+20=9y-52

240. Solve the system of equations:

36x-16y+36z-12=-360

-10x+12y+7y+4z+2=7y+48

36x+60y-4y+24z-54=-4y-606

Solutions

236. x=-7, y=10, z=9

237. x=-5, y=3, z=5

238. x=-9, y=-6, z=10

239. x=9, y=-9

240. x=-9, y=-3, z=-2

Systems of linear equations

241. Solve the system of equations:

-21x-7x+15y-3=-7x+39

-3x-12y+21=-72

242. Solve the system of equations:

-12x+20x+4y+8y-2y+2z=20x+8y-2y+120

4x+3x-9y-7y-2z-5=3x-7y-66

-48x+96z+10z-36=10z+1308

243. Solve the system of equations:

3x-10y-2y+4y-6z-3z-1=-2y+4y-3z+25

-3x-2x-10y-7y-3y-6y-8=-2x-7y-3y-6y-78

-7x+5x+8y+4z-4=5x-66

244. Solve the system of equations:

12x+12y+10z+2=48

3x+7x+4y+2z+9=7x+12

12x+21y-15z+24=21y-45

245. Solve the system of equations:

9x+15x+6y-6=15x+33

20x-2x+20y-10y-2y-16=-2x-10y-2y+24

Solutions

241.   x=3, y=7

242.   x=-8, y=1, z=10

243.   x=10, y=4, z=-6

244.   x=3, y=-5, z=7

245.   x=9, y=-7

Systems of linear equations

246. Solve the system of equations:

6x-16y+20z=-8

6x+5x+30y-18z+6=5x+90

-6y-6y+54z+16z+60=-6y+16z+48

247. Solve the system of equations:

-90x+45y+27y+27y-36=27y+27y-441

40x+24y+32y-4y=32y-4y-40

248. Solve the system of equations:

-24x+5x+60y-36z+12z-12=5x+12z-492

32x-24x-24y-36z-32=-24x-92

-6x-24y-54z-18=-168

249. Solve the system of equations:

2x-7x-y+2z+9=-7x+22

9x+18y+21y+6z-60=9x+21y-132

27x+18y-6z+4z+z+27=4z+z-54

250. Solve the system of equations:

3x+7y-4z+2z-3=2z+37

-6x-16y+12y+18z-10=12y-160

6x-5y-5z+2z+7z+10=2z+7z+69

Solutions

246. x=4, y=2, z=0

247. x=2, y=-5

248. x=0, y=-5, z=5

249. x=1, y=-5, z=3

250. x=4, y=0, z=-7