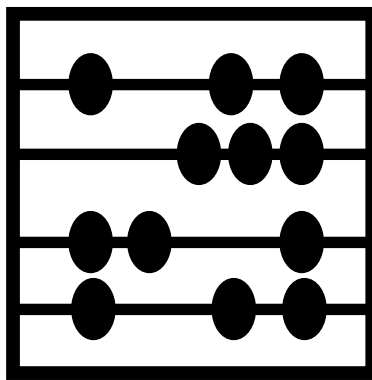

Solving Systems of Linear Equations by Elimination



Algebra 2

Practice Worksheet

Practice you can't find anywhere else

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Use the method of elimination to solve the system of equations.

Type 1: Add

1. $5x - y = 14$
 $-4x + y = -11$

2. $-6x + 5y = 0$
 $7x - 5y = 5$

3. $-x - 2y = 13$
 $x + 3y = -17$

4. $x + 9y = -31$
 $-x - 8y = 28$

...

5. $13x - 5y = -66$
 $-8x + 5y = 56$

6. $3x - 4y = -50$
 $11x + 4y = 78$

7. $-14x + 11y = -79$
 $3x - 11y = -9$

8. $2x + 15y = -164$
 $-7x - 15y = 124$

...

9. $x - 13y = 45$
 $-x + 8y = -25$

10. $-10x - 11y = -84$
 $10x + 13y = 92$

11. $11x + 12y = 30$
 $-11x - 7y = 10$

12. $8x + 11y = 31$
 $-8x + 3y = 39$

Type 2: Subtract

13.
$$\begin{aligned} 9x + y &= -12 \\ 8x + y &= -11 \end{aligned}$$

14.
$$\begin{aligned} 7x + y &= -19 \\ 6x + y &= -15 \end{aligned}$$

15.
$$\begin{aligned} x + 4y &= -6 \\ x + 3y &= -4 \end{aligned}$$

16.
$$\begin{aligned} x - 4y &= 13 \\ x - 5y &= 18 \end{aligned}$$

...

17.
$$\begin{aligned} 13x + y &= -26 \\ 7x + y &= -8 \end{aligned}$$

18.
$$\begin{aligned} 5x + 7y &= -59 \\ 9x + 7y &= -67 \end{aligned}$$

19.
$$\begin{aligned} 9x + 11y &= -49 \\ -4x + 11y &= -10 \end{aligned}$$

20.
$$\begin{aligned} 3x + 4y &= -48 \\ -7x + 4y &= -8 \end{aligned}$$

...

21.
$$\begin{aligned} 4x - 11y &= 34 \\ 4x - 3y &= 18 \end{aligned}$$

22.
$$\begin{aligned} 5x - 11y &= -30 \\ 5x + 2y &= 35 \end{aligned}$$

23.
$$\begin{aligned} 7x + 3y &= -58 \\ 7x + 13y &= -158 \end{aligned}$$

24.
$$\begin{aligned} 3x + 13y &= -125 \\ 3x + 2y &= -37 \end{aligned}$$

Type 3: Multiply then add

25.
$$\begin{aligned} -5x - 18y &= -41 \\ -2x + 9y &= 16 \end{aligned}$$

26.
$$\begin{aligned} 2x - 7y &= -43 \\ 3x + 14y &= 58 \end{aligned}$$

27.
$$\begin{aligned} -5w + 18x &= 93 \\ -2w - 9x &= -60 \end{aligned}$$

28.
$$\begin{aligned} -4x - 3y &= -83 \\ -3x + y &= -20 \end{aligned}$$

...

29.
$$\begin{aligned} -2j - 5k &= -32 \\ j - 2k &= -20 \end{aligned}$$

30.
$$\begin{aligned} -3c + 2d &= 29 \\ c + 3d &= -39 \end{aligned}$$

31.
$$\begin{aligned} -13c - 2d &= 61 \\ 39c - 7d &= -40 \end{aligned}$$

32.
$$\begin{aligned} 6t + 5u &= 89 \\ -3t + 2u &= -13 \end{aligned}$$

...

33.
$$\begin{aligned} -5a + 2b &= 7 \\ -10a + 3b &= 13 \end{aligned}$$

34.
$$\begin{aligned} 7l - 5m &= 53 \\ 14l - 3m &= 22 \end{aligned}$$

35.
$$\begin{aligned} 2s + 7t &= 15 \\ 5s + 28t &= 90 \end{aligned}$$

36.
$$\begin{aligned} -u + 2v &= 1 \\ -2u + 9v &= 42 \end{aligned}$$



$$\begin{aligned} 37. \quad & -42y + 5z = -71 \\ & -14y + 3z = -9 \end{aligned}$$

$$\begin{aligned} 38. \quad & v + 2w = 7 \\ & 4v + 3w = 43 \end{aligned}$$

$$\begin{aligned} 39. \quad & -2f - 13g = -40 \\ & -3f - 65g = -151 \end{aligned}$$

$$\begin{aligned} 40. \quad & 3y + 35z = -540 \\ & 2y + 7z = -115 \end{aligned}$$

$$\begin{aligned} 41. \quad & -36y + 7z = -71 \\ & -9y + 2z = -19 \end{aligned}$$

$$\begin{aligned} 42. \quad & 44t - 5u = 605 \\ & 11t - 2u = 143 \end{aligned}$$

Type 4: Multiply both then add

$$\begin{aligned} 43. \quad & -8y - 3z = -5 \\ & -7y + 2z = -9 \end{aligned}$$

$$\begin{aligned} 44. \quad & -2l - 5m = -57 \\ & -7l + 3m = -15 \end{aligned}$$

$$\begin{aligned} 45. \quad & 9t + 5u = -4 \\ & 7t - 8u = 92 \end{aligned}$$

$$\begin{aligned} 46. \quad & 7k - 4l = -1 \\ & 8k + 3l = 67 \end{aligned}$$

...

$$\begin{aligned} 47. \quad & -3y + 2z = -23 \\ & 2y + 7z = -18 \end{aligned}$$

$$\begin{aligned} 48. \quad & 5b + 2c = -17 \\ & -2b + 9c = 46 \end{aligned}$$



$$\begin{aligned} 49. \quad & 3t + 2u = 16 \\ & -4t + 9u = -68 \end{aligned}$$

$$\begin{aligned} 50. \quad & -5u - 8v = 69 \\ & 8u - 7v = 48 \end{aligned}$$

...

$$\begin{aligned} 51. \quad & 4a - 3b = 4 \\ & 9a - 7b = 6 \end{aligned}$$

$$\begin{aligned} 52. \quad & 5v - 9w = -65 \\ & 9v - 7w = -71 \end{aligned}$$

$$\begin{aligned} 53. \quad & 8w + 3x = -70 \\ & 11w + 7x = -102 \end{aligned}$$

$$\begin{aligned} 54. \quad & -8l + 7m = -4 \\ & -13l + 10m = 10 \end{aligned}$$

$$\begin{aligned} 55. \quad & -7j + 9k = -3 \\ & -6j + 5k = 11 \end{aligned}$$

$$\begin{aligned} 56. \quad & 11f - 5g = -90 \\ & 13f - 4g = -93 \end{aligned}$$

$$\begin{aligned} 57. \quad & -13r - 4s = 89 \\ & -5r - 9s = -18 \end{aligned}$$

$$\begin{aligned} 58. \quad & 5k + 4l = 72 \\ & 11k + 13l = 171 \end{aligned}$$

$$\begin{aligned} 59. \quad & -5y + 13z = 83 \\ & -13y + 6z = -90 \end{aligned}$$

$$\begin{aligned} 60. \quad & -11c - 12d = -223 \\ & -8c - 11d = -194 \end{aligned}$$

Type 1: Add

1. $x = 3, y = 1$

2. $x = -1, y = 9$

3. $x = -5, y = -4$

4. $x = -4, y = -3$

5. $x = -2, y = 8$

6. $x = 2, y = 14$

7. $x = 8, y = 3$

8. $x = 8, y = -12$

9. $x = -7, y = -4$

10. $x = 4, y = 4$

11. $x = -6, y = 8$

12. $x = -3, y = 5$

Type 2: Subtract

13. $x = -1, y = -3$

14. $x = -4, y = 9$

15. $x = 2, y = -2$

16. $x = -7, y = -5$

17. $x = -3, y = 13$

18. $x = -2, y = -7$

19. $x = -3, y = -2$



20. $x = -4, y = -9$

21. $x = 3, y = -2$

22. $x = 5, y = 5$

23. $x = -4, y = -10$

24. $x = -7, y = -8$

Type 3: Multiply then add

25. $x = 1, y = 2$

26. $x = -4, y = 5$

27. $w = 3, x = 6$

28. $x = 11, y = 13$

29. $j = -4, k = 8$

30. $c = -15, d = -8$

31. $c = -3, d = -11$

32. $t = 9, u = 7$

33. $a = -1, b = 1$

34. $l = -1, m = -12$

35. $s = -10, t = 5$

36. $u = 15, v = 8$

37. $y = 3, z = 11$

38. $v = 13, w = -3$

39. $f = 7, g = 2$



40. $y = -5, z = -15$

41. $y = 1, z = -5$

42. $t = 15, u = 11$

Type 4: Multiply both then add

43. $y = 1, z = -1$

44. $l = 6, m = 9$

45. $t = 4, u = -8$

46. $k = 5, l = 9$

47. $y = 5, z = -4$

48. $b = -5, c = 4$

49. $t = 8, u = -4$

50. $u = -1, v = -8$

51. $a = 10, b = 12$

52. $v = -4, w = 5$

53. $w = -8, x = -2$

54. $l = -10, m = -12$

55. $j = -6, k = -5$

56. $f = -5, g = 7$

57. $r = -9, s = 7$

58. $k = 12, l = 3$

59. $y = 12, z = 11$



60. $c = 5, d = 14$