

MathCon

The Mathematics Firm

Sistemas de Ecuaciones Lineales

100 Problemas de Sistemas de Ecuaciones Lineales 2×2

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Contenido

1. Sistemas de Ecuaciones Lineales

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Sistemas de Ecuaciones Lineales

Resolver los siguientes sistemas de ecuaciones lineales por el método de Gauss.

1.

$$\begin{aligned}x - 2y &= 8 \\ -4x + 5y &= -5\end{aligned}$$

Solución $(-10, -9)$

2.

$$\begin{aligned}2x - y &= 7 \\ x - y &= 7\end{aligned}$$

Solución $(0, -7)$

3.

$$\begin{aligned}2x + 4y &= 10 \\ 2x + y &= 1\end{aligned}$$

Solución $(-1, 3)$

4.

$$\begin{aligned}2x + y &= 0 \\ -5x - 2y &= 3\end{aligned}$$

Solución $(-3, 6)$

5.

$$\begin{aligned}x - 2y &= 4 \\ 5x + 2y &= 8\end{aligned}$$

Solución $(2, -1)$

6.

$$\begin{aligned}2x - 2y &= 6 \\2x - 5y &= -3\end{aligned}$$

Solución (6, 3)

7.

$$\begin{aligned}x + 5y &= -7 \\x + y &= 1\end{aligned}$$

Solución (3, -2)

8.

$$\begin{aligned}-x + y &= 3 \\x - 3y &= 1\end{aligned}$$

Solución (-5, -2)

9.

$$\begin{aligned}-x - 4y &= 3 \\x - 3y &= -3\end{aligned}$$

Solución (-3, 0)

10.

$$\begin{aligned}-6x - 9y &= -3 \\5x + 7y &= -7\end{aligned}$$

Solución (-28, 19)

11.

$$\begin{aligned}-3x + 5y &= -10 \\8x - 10y &= 0\end{aligned}$$

Solución (-10, -8)

12.

$$\begin{aligned}-5x + 4y &= -3 \\8x - 6y &= 3\end{aligned}$$

Solución (-3, -9/2)

13.

$$\begin{aligned}-10x + 5y &= -4 \\-10x + 4y &= -3\end{aligned}$$

Solución (-1/10, -1)

14.

$$\begin{aligned}-6x + 4y &= 6 \\5x - 4y &= -8\end{aligned}$$

Solución (2, 9/2)

15.

$$\begin{aligned}5x - 4y &= 5 \\ -7x + 6y &= -8\end{aligned}$$

Solución $(-1, -5/2)$

16.

$$\begin{aligned}-4x + 5y &= -2 \\ -3x + 3y &= -9\end{aligned}$$

Solución $(13, 10)$

17.

$$\begin{aligned}-7x + 9y &= -3 \\ 5x - 5y &= -5\end{aligned}$$

Solución $(-6, -5)$

18.

$$\begin{aligned}-8x - 6y &= 2 \\ -9x - 6y &= -1\end{aligned}$$

Solución $(3, -13/3)$

19.

$$\begin{aligned}-10x - 9y &= 9 \\ 10x + 7y &= 3\end{aligned}$$

Solución $(9/2, -6)$

20.

$$\begin{aligned}6x + y &= -1 \\ -2x + y &= -9\end{aligned}$$

Solución $(1, -7)$

21.

$$\begin{aligned}2x - 3y &= -9 \\ -8x + 10y &= -2\end{aligned}$$

Solución $(24, 19)$

22.

$$\begin{aligned}8x + 3y &= 6 \\ -4x + y &= -8\end{aligned}$$

Solución $(3/2, -2)$

23.

$$\begin{aligned}6x - 4y &= 2 \\ 7x - 4y &= 0\end{aligned}$$

Solución $(-2, -7/2)$

24.

$$\begin{aligned}10x - 8y &= 2 \\8x - 7y &= 1\end{aligned}$$

Solución (1, 1)

25.

$$\begin{aligned}8x + 8y &= -8 \\3x + 5y &= 5\end{aligned}$$

Solución (-5, 4)

26.

$$\begin{aligned}2x + 3y &= 0 \\8x + 9y &= 6\end{aligned}$$

Solución (3, -2)

27.

$$\begin{aligned}2x - 7y &= -10 \\x - 3y &= 8\end{aligned}$$

Solución (86, 26)

28.

$$\begin{aligned}-x - 2y &= -7 \\-3x - 2y &= 3\end{aligned}$$

Solución (-5, 6)

29.

$$\begin{aligned}-10x - 8y &= -4 \\5x + 3y &= 3\end{aligned}$$

Solución (6/5, -1)

30.

$$\begin{aligned}9x + 7y &= -10 \\4x + 3y &= -5\end{aligned}$$

Solución (-5, 5)

31.

$$\begin{aligned}-x + y &= -7 \\6x - 7y &= 5\end{aligned}$$

Solución (44, 37)

32.

$$\begin{aligned}-2x - 3y &= 5 \\-x + 2y &= -1\end{aligned}$$

Solución (7, 3)

33.

$$\begin{aligned} -7x + 9y &= 7 \\ -4x + 4y &= -4 \end{aligned}$$

Solución (8, 7)

34.

$$\begin{aligned} -3x - 7y &= -5 \\ -4x - 9y &= 0 \end{aligned}$$

Solución (-45, 20)

35.

$$\begin{aligned} -5x - 8y &= -8 \\ 3x + 5y &= 9 \end{aligned}$$

Solución (-32, 21)

36.

$$\begin{aligned} -x + 3y &= 2 \\ -x + 2y &= 5 \end{aligned}$$

Solución (-11, -3)

37.

$$\begin{aligned} -6x - 4y &= -2 \\ 2x + 2y &= 4 \end{aligned}$$

Solución (-3, 5)

38.

$$\begin{aligned} 5x - 3y &= -8 \\ 2x - 3y &= 4 \end{aligned}$$

Solución (-4, -4)

39.

$$\begin{aligned} -2x + 5y &= -7 \\ -4x + 6y &= -2 \end{aligned}$$

Solución (-4, -3)

40.

$$\begin{aligned} 4x - 10y &= -6 \\ 4x - 9y &= 1 \end{aligned}$$

Solución (16, 7)

41.

$$\begin{aligned} 3x + 2y &= 1 \\ 5x + 3y &= 10 \end{aligned}$$

Solución (17, -25)

42.

$$\begin{aligned}8x + 7y &= 6 \\ -4x - 4y &= -4\end{aligned}$$

Solución $(-1, 2)$

43.

$$\begin{aligned}x + y &= 4 \\ -6x - 5y &= -4\end{aligned}$$

Solución $(-16, 20)$

44.

$$\begin{aligned}-4x + 9y &= 2 \\ x - 2y &= -3\end{aligned}$$

Solución $(-23, -10)$

45.

$$\begin{aligned}11x + 12y &= 1 \\ 10x + 11y &= 2\end{aligned}$$

Solución $(-13, 12)$

46.

$$\begin{aligned}5x + 16y &= 8 \\ 6x + 19y &= 10\end{aligned}$$

Solución $(8, -2)$

47.

$$\begin{aligned}-x + 3y &= 4 \\ 2x - 7y &= -3\end{aligned}$$

Solución $(-19, -5)$

48.

$$\begin{aligned}-5x + 2y &= 3 \\ 8x - 3y &= 1\end{aligned}$$

Solución $(11, 29)$

49.

$$\begin{aligned}x + 6y &= -9 \\ -x - 7y &= -6\end{aligned}$$

Solución $(-99, 15)$

50.

$$\begin{aligned}-5x + 14y &= 4 \\ -6x + 16y &= 4\end{aligned}$$

Solución $(2, 1)$

51.

$$\begin{aligned}10x + 17y &= 4 \\ 3x + 5y &= 3\end{aligned}$$

Solución $(31, -18)$

52.

$$\begin{aligned}3x + 4y &= 1 \\ -14x - 19y &= -8\end{aligned}$$

Solución $(-13, 10)$

53.

$$\begin{aligned}-2x - 3y &= -4 \\ -8x - 14y &= -4\end{aligned}$$

Solución $(11, -6)$

54.

$$\begin{aligned}2x + 19y &= 1 \\ x + 10y &= 3\end{aligned}$$

Solución $(-47, 5)$

55.

$$\begin{aligned}11x - y &= -2 \\ -10x + y &= -9\end{aligned}$$

Solución $(-11, -119)$

56.

$$\begin{aligned}-7x - 13y &= 4 \\ -8x - 15y &= 0\end{aligned}$$

Solución $(-60, 32)$

57.

$$\begin{aligned}14x + y &= 4 \\ -13x - y &= 5\end{aligned}$$

Solución $(9, -122)$

58.

$$\begin{aligned}12x - 5y &= -7 \\ 19x - 8y &= -5\end{aligned}$$

Solución $(-31, -73)$

59.

$$\begin{aligned}x + y &= -2 \\ -14x - 18y &= -8\end{aligned}$$

Solución $(-11, 9)$

60.

$$\begin{aligned}4x + 5y &= 6 \\ -7x - 9y &= 6\end{aligned}$$

Solución (84, -66)

61.

$$\begin{aligned}-16x + 3y &= -3 \\ 5x - y &= 0\end{aligned}$$

Solución (3, 15)

62.

$$\begin{aligned}18x - 5y &= -3 \\ 10x - 3y &= -5\end{aligned}$$

Solución (4, 15)

63.

$$\begin{aligned}17x - 16y &= 7 \\ 18x - 17y &= 4\end{aligned}$$

Solución (55, 58)

64.

$$\begin{aligned}x + 2y &= 2 \\ -8x - 17y &= 10\end{aligned}$$

Solución (54, -26)

65.

$$\begin{aligned}9x - 17y &= -1 \\ -x + 2y &= 4\end{aligned}$$

Solución (66, 35)

66.

$$\begin{aligned}-8x - 12y &= -8 \\ x + 2y &= 4\end{aligned}$$

Solución (-8, 6)

67.

$$\begin{aligned}-15x - 16y &= 3 \\ -x - y &= -1\end{aligned}$$

Solución (19, -18)

68.

$$\begin{aligned}-7x - 4y &= 2 \\ 12x + 7y &= -1\end{aligned}$$

Solución (-10, 17)

69.

$$\begin{aligned} -7x - 13y &= 7 \\ -6x - 11y &= 1 \end{aligned}$$

Solución (64, -35)

70.

$$\begin{aligned} -19x - 5y &= -4 \\ -4x - y &= -7 \end{aligned}$$

Solución (31, -117)

71.

$$\begin{aligned} 14x + 2y &= 2 \\ 5x + y &= -3 \end{aligned}$$

Solución (2, -13)

72.

$$\begin{aligned} -7x + 13y &= -4 \\ -8x + 15y &= -6 \end{aligned}$$

Solución (-18, -10)

73.

$$\begin{aligned} 9x - 17y &= -5 \\ -10x + 19y &= 6 \end{aligned}$$

Solución (7, 4)

74.

$$\begin{aligned} -x - 9y &= 9 \\ 2x + 17y &= 3 \end{aligned}$$

Solución (180, -21)

75.

$$\begin{aligned} -9x + 5y &= -1 \\ 16x - 9y &= 9 \end{aligned}$$

Solución (-36, -65)

76.

$$\begin{aligned} x - 2y &= -8 \\ -2x + 5y &= 7 \end{aligned}$$

Solución (-26, -9)

77.

$$\begin{aligned} -4x + 4y &= -8 \\ -15x + 14y &= 0 \end{aligned}$$

Solución (-28, -30)

78.

$$\begin{aligned}4x - 4y &= 8 \\ -23x + 22y &= 6\end{aligned}$$

Solución $(-50, -52)$

79.

$$\begin{aligned}2x - 9y &= 1 \\ x - 5y &= -7\end{aligned}$$

Solución $(68, 15)$

80.

$$\begin{aligned}-6x - y &= -2 \\ -25x - 4y &= -2\end{aligned}$$

Solución $(-6, 38)$

81.

$$\begin{aligned}-4x + 3y &= -7 \\ -24x + 19y &= 9\end{aligned}$$

Solución $(40, 51)$

82.

$$\begin{aligned}-5x - 4y &= -7 \\ -29x - 23y &= -2\end{aligned}$$

Solución $(-153, 193)$

83.

$$\begin{aligned}-8x - 3y &= 6 \\ -29x - 11y &= 1\end{aligned}$$

Solución $(-63, 166)$

84.

$$\begin{aligned}9x - 10y &= 7 \\ 8x - 9y &= 1\end{aligned}$$

Solución $(53, 47)$

85.

$$\begin{aligned}4x - y &= -7 \\ 5x - y &= 10\end{aligned}$$

Solución $(17, 75)$

86.

$$\begin{aligned}13x - 19y &= 9 \\ 11x - 16y &= -4\end{aligned}$$

Solución $(-220, -151)$

87.

$$\begin{aligned}10x + y &= -9 \\ 9x + y &= 0\end{aligned}$$

Solución $(-9, 81)$

88.

$$\begin{aligned}-25x - 14y &= -3 \\ 16x + 9y &= 8\end{aligned}$$

Solución $(-85, 152)$

89.

$$\begin{aligned}-15x - 26y &= 9 \\ x + 2y &= 9\end{aligned}$$

Solución $(-63, 36)$

90.

$$\begin{aligned}-33x + 50y &= 9 \\ -2x + 3y &= 9\end{aligned}$$

Solución $(-423, -279)$

91.

$$\begin{aligned}-21x - 22y &= -6 \\ -22x - 23y &= 5\end{aligned}$$

Solución $(-248, 237)$

92.

$$\begin{aligned}-21x - 25y &= 5 \\ 22x + 26y &= -6\end{aligned}$$

Solución $(-5, 4)$

93.

$$\begin{aligned}-38x - 20y &= -8 \\ -23x - 12y &= -6\end{aligned}$$

Solución $(-14, 27)$

94.

$$\begin{aligned}20x - 9y &= -4 \\ 44x - 20y &= 4\end{aligned}$$

Solución $(-29, -64)$

95.

$$\begin{aligned}-5x - 21y &= 10 \\ -6x - 25y &= -7\end{aligned}$$

Solución $(397, -95)$

96.

$$\begin{aligned} -29x + 13y &= 3 \\ -22x + 10y &= -6 \end{aligned}$$

Solución $(-27, -60)$

97.

$$\begin{aligned} x + 70y &= 3 \\ -x - 71y &= 10 \end{aligned}$$

Solución $(913, -13)$

98.

$$\begin{aligned} -19x + 34y &= 9 \\ -18x + 32y &= 6 \end{aligned}$$

Solución $(21, 12)$

99.

$$\begin{aligned} 15x + 49y &= -4 \\ 11x + 36y &= 1 \end{aligned}$$

Solución $(-193, 59)$

100.

$$\begin{aligned} -59x - 57y &= 4 \\ -88x - 85y &= 9 \end{aligned}$$

Solución $(-173, 179)$