

Find the intersection of each of the following pairs of lines using Elimination:

1.  $7x + 5y = 8$ ,  $-3x + (-2)y = -6$
2.  $-5x - 7y = -3$ ,  $-4x + (-6)y = 1$
3.  $7x - (-y) = -6$ ,  $-x - 0y = -6$
4.  $6x - (-y) = -6$ ,  $-6x - y = -1$
5.  $-4x - (-9)y = -8$ ,  $20x - 45y = -32$
6.  $-2x + (-3)y = 5$ ,  $x - (-y) = -14$
7.  $-2x + (-7)y = -12$ ,  $2x + 6y = 13$
8.  $-x - (-7)y = -1$ ,  $2x - 16y = -12$
9.  $-5x + 3y = 8$ ,  $x + (-y) = -1$
10.  $x + (-3)y = 4$ ,  $-5x + 16y = 7$
11.  $3x - 2y = -11$ ,  $-2x + 2y = 3$
12.  $x - (-2)y = 13$ ,  $-x - 0y = 14$
13.  $-6x - (-7)y = -2$ ,  $-2x + 2y = 13$
14.  $-7x - 5y = 11$ ,  $-4x + (-3)y = -13$
15.  $5x - (-6)y = 5$ ,  $25x + 30y = 4$
16.  $2x - (-5)y = -5$ ,  $-6x - 14y = -4$
17.  $-2x - 7y = 1$ ,  $2x + 6y = 13$
18.  $-x + 6y = -1$ ,  $2x - 13y = -6$
19.  $-x + (-7)y = 3$ ,  $-4x - 30y = -13$
20.  $3x - 7y = 11$ ,  $-5x + 12y = -11$
21.  $-9x + 9y = 27$ ,  $-2x - (-2)y = 0$
22.  $-x - (-5)y = -8$ ,  $-6x + 28y = 8$
23.  $-x + (-4)y = -5$ ,  $-2x - 9y = -6$
24.  $-x - (-7)y = 9$ ,  $-3x - (-20)y = 11$
25.  $-7x - 10y = 2$ ,  $14x - (-20)y = -4$
26.  $-x - y = -4$ ,  $4x + 2y = 8$
27.  $x - 3y = 10$ ,  $-4x + 14y = 13$
28.  $2x + (-6)y = 4$ ,  $7x - 20y = -5$
29.  $6x - (-7)y = -2$ ,  $-7x - 8y = 14$
30.  $x - (-3)y = 12$ ,  $-x + (-2)y = -14$
31.  $-x - 5y = 10$ ,  $3x + 13y = -2$
32.  $x - 8y = 5$ ,  $-5x - (-40)y = -25$
33.  $-3x - (-5)y = -6$ ,  $-x + y = -4$
34.  $-6x + 2y = 11$ ,  $-4x - (-y) = 8$
35.  $4x - 2y = -6$ ,  $3x + (-y) = 3$
36.  $8x + (-8)y = 0$ ,  $3x - 3y = 7$
37.  $2x + 5y = 12$ ,  $-5x + (-12)y = 5$
38.  $-4x - 2y = 8$ ,  $7x - (-3)y = -6$
39.  $-x - (-5)y = 2$ ,  $-4x + 19y = 8$
40.  $-2x + 7y = -6$ ,  $7x - 25y = -9$
41.  $-4x + 2y = 4$ ,  $-7x - (-3)y = -7$
42.  $2x - (-4)y = 5$ ,  $-2x + (-3)y = 12$
43.  $-6x + (-5)y = -2$ ,  $-6x + (-5)y = -6$
44.  $-x + 5y = -4$ ,  $-4x + 19y = 8$
45.  $x + 6y = -2$ ,  $-4x + (-22)y = -6$
46.  $-5x - y = -2$ ,  $-3x - y = -11$
47.  $5x + 9y = -2$ ,  $-25x + (-45)y = 10$
48.  $-x + 7y = 3$ ,  $-3x - (-19)y = 14$
49.  $2x + (-2)y = 14$ ,  $-2x - (-3)y = -9$
50.  $-2x - (-3)y = 4$ ,  $-x + y = 11$
51.  $-x - 4y = 7$ ,  $-5x + (-21)y = 11$
52.  $-2x - y = -2$ ,  $4x + y = 3$
53.  $2x - (-6)y = -6$ ,  $-4x - 11y = 7$
54.  $-7x - (-6)y = 8$ ,  $-6x + 5y = -3$

55.  $x + (-3)y = 3, -3x + 10y = -11$

56.  $-6x + (-y) = 0, 30x + 5y = 0$

57.  $5x + 3y = -9, -7x - 4y = -8$

58.  $-x - (-8)y = 2, x + (-8)y = 20$

59.  $-2x - (-2)y = -11, -3x + 2y = 13$

60.  $x - (-4)y = 15, -x - 3y = 7$

61.  $7x + 6y = -7, -6x - 5y = -8$

62.  $6x - 7y = -11, 2x + (-2)y = -2$

63.  $-2x - 5y = 0, 2x + 5y = -22$

64.  $5x - (-8)y = -5, 25x - (-40)y = -25$

65.  $-10x - (-6)y = -12, 15x - 9y = 18$

66.  $-6x - (-7)y = 7, -7x + 8y = 9$

67.  $-2x - (-y) = -6, -4x + y = -7$

68.  $-x - 5y = -3, 4x - (-19)y = 12$

69.  $-x + 5y = 4, 7x + (-36)y = -11$

70.  $-3x + y = 7, -5x - (-y) = 9$

71.  $x - (-3)y = -13, 2x - (-8)y = 7$

72.  $-7x + 4y = 12, -2x + y = -2$

73.  $2x + 5y = -4, -2x + (-4)y = 15$

74.  $-2x + 4y = 13, -5x - (-9)y = 5$

75.  $2x - 5y = -15, -6x + 16y = 3$

76.  $x + (-y) = 5, 2x - y = 13$

77.  $3x + 8y = -5, -9x - 24y = 15$

78.  $2x - 2y = -8, 3x - 2y = 1$

79.  $2x - y = -11, 3x + (-y) = 7$

80.  $-5x - (-y) = -6, -7x + y = -4$

81.  $x - (-6)y = -14, 5x - (-31)y = -4$

82.  $-x + (-7)y = 10, 7x + 48y = 6$

83.  $4x + (-5)y = -8, x - y = 3$

84.  $-x - 5y = -2, x - (-3)y = -13$

85.  $x - (-y) = 12, -3x + (-y) = -5$

86.  $4x - y = 5, -7x - (-2)y = 2$

87.  $-2x + (-2)y = 3, 3x - (-2)y = 10$

88.  $-2x + 6y = 14, -3x - (-8)y = 3$

89.  $3x + 5y = -8, 4x + 7y = -3$

90.  $-x + 5y = 14, -5x + 24y = -11$

91.  $-6x + 5y = 10, 7x - 6y = 4$

92.  $-x - 7y = 11, 2x + 13y = 10$

93.  $x + 4y = 6, 2x + 9y = 15$

94.  $-6x - (-y) = -13, -x - 0y = -15$

95.  $7x - 7y = 56, -2x + 2y = -13$

96.  $8x - (-6)y = 14, -4x + (-3)y = -7$

97.  $-4x + 3y = -11, 6x + (-5)y = 14$

98.  $x + 4y = 5, -6x + (-22)y = -15$

99.  $-8x + 9y = -1, -24x - (-27)y = -13$

100.  $-x + (-2)y = 9, x + y = -1$

Solutions:

1.  $x = 14, y = -18$
2.  $x = \frac{25}{2}, y = \frac{-17}{2}$
3.  $x = 6, y = -48$
4. None. They are parallel.
5. None. They are parallel.
6.  $x = -37, y = 23$
7.  $x = \frac{19}{2}, y = -1$
8.  $x = 50, y = 7$
9.  $x = \frac{-5}{2}, y = \frac{-3}{2}$
10.  $x = 85, y = 27$
11.  $x = -8, y = \frac{-13}{2}$
12.  $x = -14, y = \frac{27}{2}$
13.  $x = \frac{-95}{2}, y = -41$
14.  $x = -98, y = 135$
15. None. They are parallel.
16.  $x = 45, y = -19$
17.  $x = \frac{97}{2}, y = -14$
18.  $x = 49, y = 8$
19.  $x = \frac{-181}{2}, y = \frac{25}{2}$
20.  $x = 55, y = 22$
21. None. They are parallel.
22.  $x = -132, y = -28$
23.  $x = 21, y = -4$
24.  $x = 103, y = 16$
25. The Entire Line
26.  $x = 0, y = 4$
27.  $x = \frac{179}{2}, y = \frac{53}{2}$
28.  $x = -55, y = -19$
29.  $x = -82, y = 70$
30.  $x = 18, y = -2$
31.  $x = 60, y = -14$
32. The Entire Line
33.  $x = 7, y = 3$
34.  $x = \frac{-5}{2}, y = -2$
35.  $x = 6, y = 15$
36. None. They are parallel.
37.  $x = -169, y = 70$
38.  $x = 6, y = -16$
39.  $x = -2, y = 0$
40.  $x = 213, y = 60$
41.  $x = 13, y = 28$
42.  $x = \frac{-63}{2}, y = 17$
43. None. They are parallel.
44.  $x = -116, y = -24$
45.  $x = 40, y = -7$
46.  $x = \frac{-9}{2}, y = \frac{49}{2}$
47. The Entire Line
48.  $x = \frac{-41}{2}, y = \frac{-5}{2}$
49.  $x = 12, y = 5$
50.  $x = -29, y = -18$
51.  $x = -103, y = 24$
52.  $x = \frac{1}{2}, y = 1$
53.  $x = 12, y = -5$
54.  $x = 58, y = 69$
55.  $x = -3, y = -2$
56. The Entire Line
57.  $x = 60, y = -103$
58. None. They are parallel.
59.  $x = -24, y = \frac{-59}{2}$
60.  $x = -73, y = 22$
61.  $x = 83, y = -98$
62.  $x = 4, y = 5$
63. None. They are parallel.
64. The Entire Line
65. The Entire Line
66.  $x = -7, y = -5$
67.  $x = \frac{1}{2}, y = -5$
68.  $x = 3, y = 0$
69.  $x = -89, y = -17$
70.  $x = -1, y = 4$
71.  $x = \frac{-125}{2}, y = \frac{33}{2}$
72.  $x = 20, y = 38$
73.  $x = \frac{-59}{2}, y = 11$
74.  $x = \frac{97}{2}, y = \frac{55}{2}$
75.  $x = \frac{-225}{2}, y = -42$
76.  $x = 8, y = 3$
77. The Entire Line
78.  $x = 9, y = 13$
79.  $x = 18, y = 47$
80.  $x = -1, y = -11$
81.  $x = -410, y = 66$
82.  $x = 522, y = -76$
83.  $x = 23, y = 20$
84.  $x = \frac{-71}{2}, y = \frac{15}{2}$
85.  $x = \frac{-7}{2}, y = \frac{31}{2}$
86.  $x = 12, y = 43$
87.  $x = 13, y = \frac{-29}{2}$
88.  $x = 47, y = 18$
89.  $x = -41, y = 23$
90.  $x = 391, y = 81$
91.  $x = -80, y = -94$
92.  $x = 213, y = -32$
93.  $x = -6, y = 3$
94.  $x = 15, y = 77$
95. None. They are parallel.
96. The Entire Line
97.  $x = \frac{13}{2}, y = 5$
98.  $x = -25, y = \frac{15}{2}$
99. None. They are parallel.
100.  $x = 7, y = -8$