

Solve each of the following for x :

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

55. $-16x - (-12) = 20x + 16x$

56. $-1 - (-2) - (-9x) = 5 - (-9x)$

57. $9 + 20x = 4x + 14 - (-2x)$

58. $12 - 4 = x + 8$

59. $19 - (-5x) - (-12x) = -2 + (-16x) - (-12x)$

60. $12x + 11 - (-3) = 12x - 16 - 3$

61. $-6 + (-16x) + 8 = 8 - (-2x) + 7x$

62. $3x - (-x) - (-20) = -15 + (-16) + 11$

63. $-19 - 20 = 20x - 20x + 1$

64. $-3x + (-10) + (-2) = 18 - 7 - 3x$

65. $-14 + 7 + 10x = 17x - (-10x) - (-15x)$

66. $-2 + (-12x) = -4 - 11 + 5x$

67. $-7 + (-13) = -18x - (-3x)$

68. $-6x + (-15x) = 6 - (-19x)$

69. $5 - (-16) = 12x + (-12x)$

70. $-14x + 13 + (-9) = 14x + 3x + (-18)$

71. $-16 - (-5x) - (-5) = 3 + (-14) - (-5x)$

72. $x + 7 + (-7) = 17x + 17x$

73. $10x - 2x + 15x = -5x + 15$

74. $8x - (-2x) - 7x = 3x - 1$

75. $-20 - (-10x) = 7 + 1$

76. $2 - 10 = -12x - 16 - (-12x)$

77. $-20 + 4x + (-15) = 19x - 15x$

78. $-17x + (-3x) = -13x - 18x$

79. $-9 - 2 + (-5) = -7x - 11 - (-7x)$

80. $20 + 3x - (-6x) = -6 + (-4) + 9x$

81. $3 + (-8x) - (-1) = 12x + 16 - 1$

82. $18 - (-2) + 13x = -13 - (-16x) - 18x$

83. $-4 - 15 = -9 - (-15x) + (-15x)$

84. $18 + (-8x) + 17x = -x + (-9) - (-14)$

85. $2x - 12x = 17 - 10x + 5$

86. $5 + 12x = 12x - 18$

87. $6x + 13 = 6x + (-1)$

88. $4 + (-8x) - (-14) = 8 - x + (-4x)$

89. $16 - 20 = -4x - 3$

90. $20x + 5x = 14x + 11x$

91. $3 - (-7) = 6x + 4$

92. $-17x - (-3x) + (-3x) = -3x - 14x$

93. $-17x - (-20x) = 3x + 2$

94. $17 + (-9x) + 8x = 7 + 2$

95. $-20x - 16x = 18 - (-18)$

96. $18 - 11x = -1 - (-5)$

97. $-9 + (-2x) - (-2x) = 1 - (-13)$

98. $14x + 2 + (-x) = 15x - 2x - (-4)$

99. $-20x - 3 = -9x - (-20) - 12x$

100. $13x - 19 + (-15) = -4x - (-6)$

Solutions:

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|-------------------------|--------------------------|--------------------------|--------------------------|
| 1. $x = \frac{-11}{5}$ | 26. $x = \frac{-11}{5}$ | 51. $x = \frac{-11}{17}$ | 76. No Solution |
| 2. $x = \frac{-1}{7}$ | 27. No Solution | 52. $x = -26$ | 77. No Solution |
| 3. No Solution | 28. $x = 0$ | 53. $x = \frac{15}{2}$ | 78. $x = 0$ |
| 4. $x = \frac{-17}{10}$ | 29. All Real Numbers | 54. No Solution | 79. No Solution |
| 5. No Solution | 30. No Solution | 55. $x = \frac{3}{13}$ | 80. No Solution |
| 6. $x = \frac{12}{5}$ | 31. $x = \frac{4}{9}$ | 56. No Solution | 81. $x = \frac{-11}{20}$ |
| 7. All Real Numbers | 32. No Solution | 57. $x = \frac{5}{14}$ | 82. $x = \frac{-11}{5}$ |
| 8. No Solution | 33. $x = \frac{-7}{16}$ | 58. $x = 0$ | 83. No Solution |
| 9. $x = \frac{-7}{16}$ | 34. $x = \frac{13}{9}$ | 59. $x = -1$ | 84. $x = \frac{-13}{10}$ |
| 10. $x = \frac{1}{40}$ | 35. $x = \frac{-2}{23}$ | 60. No Solution | 85. No Solution |
| 11. $x = \frac{-29}{4}$ | 36. $x = 0$ | 61. $x = \frac{-6}{25}$ | 86. No Solution |
| 12. No Solution | 37. $x = 0$ | 62. $x = -10$ | 87. No Solution |
| 13. No Solution | 38. $x = \frac{13}{29}$ | 63. No Solution | 88. $x = \frac{10}{3}$ |
| 14. No Solution | 39. No Solution | 64. No Solution | 89. $x = \frac{1}{4}$ |
| 15. No Solution | 40. No Solution | 65. $x = \frac{-7}{32}$ | 90. All Real Numbers |
| 16. $x = 3$ | 41. All Real Numbers | 66. $x = \frac{13}{17}$ | 91. $x = 1$ |
| 17. No Solution | 42. $x = \frac{-31}{15}$ | 67. $x = \frac{4}{3}$ | 92. All Real Numbers |
| 18. $x = \frac{-28}{3}$ | 43. $x = \frac{19}{18}$ | 68. $x = \frac{-3}{20}$ | 93. No Solution |
| 19. $x = \frac{2}{5}$ | 44. $x = 0$ | 69. No Solution | 94. $x = 8$ |
| 20. $x = 1$ | 45. $x = \frac{8}{3}$ | 70. $x = \frac{22}{31}$ | 95. $x = -1$ |
| 21. No Solution | 46. $x = \frac{24}{13}$ | 71. All Real Numbers | 96. $x = \frac{14}{11}$ |
| 22. $x = \frac{-8}{13}$ | 47. No Solution | 72. $x = 0$ | 97. No Solution |
| 23. $x = \frac{-3}{2}$ | 48. $x = \frac{-19}{13}$ | 73. $x = \frac{15}{28}$ | 98. No Solution |
| 24. $x = \frac{8}{21}$ | 49. $x = \frac{-38}{9}$ | 74. No Solution | 99. $x = 23$ |
| 25. No Solution | 50. $x = \frac{18}{5}$ | 75. $x = \frac{14}{5}$ | 100. $x = \frac{40}{17}$ |