

Practice

What number would you add to both sides to solve each equation?

1. $x - 8 = 10$

2. $x - 7 = 15$

3. $z - 5 = 12$

4. $y - 1 = 2$

5. $3 = x - 3$

6. $7 = y - 4$

What number would you ~~add~~ subtract from both sides to solve each equation?

7. $x + 5 = 11$

8. $y + 8 = 12$

9. $z + 2 = 23$

10. $x + 15 = 45$

11. $32 = y + 7$

12. $25 = x + 7$

Solve and check.

13. $p - 3 = 6$

14. $y - 5 = 3$

15. $r - 7 = -2$

16. $4 = y - 6$

17. $x - 12 = 0$

18. $z - 10 = 10$

19. $10 = x - 5$

20. $-4 + m = 0$

Solve and check.

21. $y + 9 = 24$

22. $z + 8 = 16$

23. $q + 15 = 34$

24. $5 + x = 18$

25. $12 = x + 2$

26. $20 = 8 + m$

27. $x + 12 = 30$

28. $p + 13 = 29$

Solve and check.

29. $x - 3 = 5.2$

30. $z - 3.5 = 8$

31. $z + 4 = 6.7$

32. $r + 3 = 8.2$

33. $11 = t - 2.2$

34. $4.6 = x - 4.5$

35. $x + 2.5 = 8$

36. $5 = y + 3.7$

37. $m - 3.2 = 4.7$

38. $5.1 = s - 0.6$

39. $s + 7.2 = 10.2$

40. $8.1 = m + 5.1$

41. $x + 3.5 = 5.7$

42. $0.7 = t + 0.2$

Problems and Applications

43. Nick paid \$9 for a pen. He had \$7 left. Solve the equation $x - 9 = 7$ to find how much he had at the start.

44. Cape Scott, at the northern end of Vancouver Island, has hailstorms on 18 days per year. This is 11 days more than the number of days per year that Edson, Alberta, has hailstorms. Solve the equation $d + 11 = 18$ to find the number of days per year that Edson has hailstorms.

45. Montreal's Place Victoria has 15 more storeys than Winnipeg's Richardson Building. Place Victoria has 47 storeys. Solve the equation $x + 15 = 47$ to find how many storeys the Richardson Building has.

46. The average summer high temperature in St. John's, Newfoundland, is 15°C lower than in Calcutta, India. The average summer high in St. John's is 20°C . Solve the equation $x - 15 = 20$ to find the value for Calcutta.

47. Write 2 different equations that have 6 as a solution and can be solved by adding a positive integer to both sides.

48. Write 2 different equations that have 8 as a solution and can be solved by adding a negative integer to both sides.

49. What is the result when you add 0 to both sides of an equation?

Solve and check.

50. $x - 4 = -7$

51. $y - 5 = -9$

52. $x + 7 = 4$

53. $y + 6 = 3$

54. $t - 8 = -13$

55. $m - 7 = -8$

56. $t + 10 = 6$

57. $r + 7 = 6$

NUMBER POWER

On what day in which month and year will you have lived for at least 1 billion seconds?

Practice

By what number would you divide both sides to solve each equation?

1. $3x = 10$ 2. $5x = 10$ 3. $7z = 42$
 4. $4t = 20$ 5. $9s = 27$ 6. $10m = 60$
 7. $15y = 45$ 8. $3x = 15$ 9. $6n = 18$

Solve and check.

10. $4x = 8$ 11. $9y = 9$ 12. $2r = 18$
 13. $6w = 72$ 14. $8x = 32$ 15. $10m = 50$
 16. $10 = 5x$ 17. $24 = 8x$ 18. $7n = 28$
 19. $20 = 5t$ 20. $25y = 75$ 21. $60 = 15z$

Solve and check.

22. $2x = 5$ 23. $4y = 4.8$
 24. $5w = 4.5$ 25. $2 = 4x$

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26. $1.2x = 24$

27. $8 = 0.2n$

28. $0.4t = 0.8$

29. $1.2x = 3.6$

30. $3.6 = 0.6t$

31. $20 = 0.1m$

Problems and Applications

32. The height of a great gray owl is 5 times the height of a pygmy owl. A great gray owl can grow to 85 cm in height. Solve the equation $5x = 85$ to find the height of a pygmy owl.

33. Write 2 different equations that have 3 as a solution and that can be solved using division.

Solve and check.

34. $4x = -8$ 35. $3x = -12$
 36. $2x = -6$ 37. $-5x = -20$

Practice

By what number would you multiply both sides to solve each equation?

1. $\frac{x}{3} = 5$ 2. $\frac{y}{2} = 4$ 3. $\frac{t}{5} = 7$
 4. $\frac{w}{4} = 4$ 5. $\frac{x}{7} = 9$ 6. $\frac{m}{6} = 0$

Solve and check.

7. $\frac{x}{4} = 8$ 8. $\frac{y}{2} = 8$ 9. $\frac{m}{3} = 6$
 10. $\frac{y}{3} = 2$ 11. $\frac{x}{5} = 5$ 12. $\frac{y}{2} = 0$
 13. $7 = \frac{x}{7}$ 14. $4 = \frac{y}{2}$ 15. $9 = \frac{t}{3}$
 16. $\frac{x}{2} = 3$ 17. $\frac{y}{8} = 1$ 18. $\frac{y}{10} = 0$

Solve and check.

19. $\frac{x}{2} = 3.1$ 20. $\frac{y}{4} = 0.2$ 21. $\frac{t}{3} = 1.2$
 22. $0.7 = \frac{m}{5}$ 23. $11.1 = \frac{r}{6}$ 24. $\frac{s}{9} = 0$

Problems and Applications

25. Chatham, New Brunswick, has blowing snow on $\frac{1}{4}$ as many days as Churchill, Manitoba. Chatham has 16 days of blowing snow a year. Solve the equation $\frac{x}{4} = 16$ to find how many days of blowing snow Churchill has in a year.

26. Write two different equations that have 7 as a solution and that can be solved using multiplication.

27. What is the result if you multiply both sides of an equation by zero?

Solve and check.

28. $\frac{x}{2} = -4$ 29. $\frac{y}{3} = -1$ 30. $\frac{m}{-4} = 5$
 31. $\frac{n}{-5} = -3$ 32. $-5 = \frac{w}{2}$ 33. $-1 = \frac{t}{3}$

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