

2-4 Practice

Solving Equations with the Variable on Each Side

Solve each equation. Check your solution.

1. $5x - 3 = 13 - 3x$

2. $-4r - 11 = 4r + 21$

3. $1 - m = 6 - 6m$

4. $14 + 5n = -4n + 17$

5. $\frac{1}{2}k - 3 = 2 - \frac{3}{4}k$

6. $\frac{1}{2}(6 - y) = y$

7. $3(-2 - 3x) = -9x - 4$

8. $4(4 - w) = 3(2w + 2)$

9. $9(4b - 1) = 2(9b + 3)$

10. $3(6 + 5y) = 2(-5 + 4y)$

11. $-5x - 10 = 2 - (x + 4)$

12. $6 + 2(3j - 2) = 4(1 + j)$

13. $\frac{5}{2}t - t = 3 + \frac{3}{2}t$

14. $1.4f + 1.1 = 8.3 - f$

15. $\frac{2}{3}x - \frac{1}{6} = \frac{1}{2}x + \frac{5}{6}$

16. $2 - \frac{3}{4}k = \frac{1}{8}k + 9$

17. $\frac{1}{2}(3g - 2) = \frac{g}{2}$

18. $\frac{1}{3}(n + 1) = \frac{1}{6}(3n - 5)$

19. $\frac{1}{2}(5 - 2h) = \frac{h}{2}$

20. $\frac{1}{9}(2m - 16) = \frac{1}{3}(2m + 4)$

21. $3(d - 8) - 5 = 9(d + 2) + 1$

22. $2(a - 8) + 7 = 5(a + 2) - 3a - 19$

23. **NUMBERS** Two thirds of a number reduced by 11 is equal to 4 more than the number. Find the number.

24. **NUMBERS** Five times the sum of a number and 3 is the same as 3 times the difference of twice the number and 1. What is the number?

25. **NUMBER THEORY** Tripling the greater of two consecutive even integers gives the same result as subtracting 10 from the lesser even integer. What are the integers?

26. **GEOMETRY** The formula for the perimeter of a rectangle is $P = 2\ell + 2w$, where ℓ is the length and w is the width. A rectangle has a perimeter of 24 inches. Find its dimensions if its length is 3 inches greater than its width.