2-5 Skills Practice

Solving Equations with the Variable on Each Side

Justify each step.

1. $4k - 3 = 2k + 5$

$4k - 3 - 2k = 2k + 5 - 2k$ a. _____

$2k - 3 = 5$ b. _____

$2k - 3 + 3 = 5 + 3$ c. _____

$2k = 8$ d. _____

$\dfrac{2k}{2} = \dfrac{8}{2}$ e. _____

$k = 4$ f. _____

2. $2(8u + 2) = 3(2u - 7)$

$16u + 4 = 6u - 21$ a. _____

$16u + 4 - 6u = 6u - 21 - 6u$ b. _____

$10u + 4 = -21$ c. _____

$10u + 4 - 4 = -21 - 4$ d. _____

$10u = -25$ e. _____

$\dfrac{10u}{10} = \dfrac{-25}{10}$ f. _____

$u = -2.5$ g. _____

Solve each equation. Then check your solution.

3. $2m + 12 = 3m - 31$

4. $2h - 8 = h + 17$

5. $7a - 3 = 3 - 2a$

6. $4n - 12 = 12 - 4n$

7. $4x - 9 = 7x + 12$

8. $-6y - 3 = 3 - 6y$

9. $5 + 3r = 5r - 19$

10. $-9 + 8k = 7 + 4k$

11. $8q + 12 = 4(3 + 2q)$

12. $3(5j + 2) = 2(3j - 6)$

13. $6(-3v + 1) = 5(-2v - 2)$

14. $-7(2b - 4) = 5(-2b + 6)$

15. $3(8 - 3t) = 5(2 + t)$

16. $2(3u + 7) = -4(3 - 2u)$

17. $8(2f - 2) = 7(3f + 2)$

18. $5(-6 - 3d) = 3(8 + 7d)$

19. $6(w - 1) = 3(3w + 5)$

20. $7(-3y + 2) = 8(3y - 2)$

21. $\dfrac{2}{3}v - 6 = 6 - \dfrac{2}{3}v$

22. $\dfrac{1}{2} - \dfrac{5}{8}x = \dfrac{7}{8}x + \dfrac{7}{2}$

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