

Practice 6-4

Solving Equations with Variables on Both Sides

Solve each equation. Check the solution.

1. $12y = 2y + 40$

2. $6(c + 4) = 4c - 18$

3. $0.5m + 6.4 = 4.9 - 0.1m$

4. $14b = 16(b + 12)$

5. $7y = y - 42$

6. $9(d - 4) = 5d + 8$

7. $12j = 16(j - 8)$

8. $0.7p + 4.6 = 7.3 - 0.2p$

9. $6(f + 5) = 2f - 8$

10. $4 = -2(4.5p + 25)$

11. Jace owns twice as many DVDs as Louis. Bo has sixty fewer DVDs than five times Louis's collection. If Jace and Bo have the same amount of DVDs, how many DVDs are in Louis's collection?

12. Deborah has two paintings in her portfolio and paints three more each week. Kai has twelve paintings in her portfolio and paints two more each week. After how many weeks will Deborah and Kai have the same number of paintings?

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Puzzle 6-4

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Solve Exercises 1–3 by finding the steps from the left-hand column.
The letters of the answers in the correct order will spell out a phrase.

1. $2(1 + 6x) = -18 + 7x$

2. $6 + 4x = 2(2 + 3x)$

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

F. $2x = 4x + 34$

L. $20 + 12x = 7x$

B. $6 + 4x = 4 + 6x$

G. $20 = -5x$

N. $x = -17$

A. $2 = 2x$

A. $2 + 12x = -18 + 7x$

I. $1 = x$

R. $2 + 4x = 6x$

U. $-2x = 34$

E. $-4 = x$

S. $2x - 6 = 4x + 28$
