

2-4**Practice**

Form G

Solving Equations With Variables on Both Sides**Solve each equation. Check your answer.**

1. $3n + 2 = -2n - 8$

2. $15m + 22 = -7m + 18$

Write and solve an equation for each situation. Check your solution.

3. Shirley is going to have the exterior of her home painted. Tim's Painting charges \$250 plus \$14 per hour. Colorful Paints charges \$22 per hour. How many hours would the job need to take for Tim's Painting to be the better deal?

4. Tracey is looking at two different travel agencies to plan her vacation. ABC Travel offers a plane ticket for \$295 and a rental car for \$39 per day. M & N Travel offers a plane ticket for \$350 and a rental car for \$33 per day. What is the minimum number of days that Shirley's vacation should be for M & N Travel to have the better deal?

Solve each equation. Check your answer.

5. $-(5a + 6) = 2(3a + 8)$

6. $-8x - (3x + 6) = 4 - x$

Determine whether each equation is an *identity* or whether it has *no solution*.

7. $4(3m + 4) = 2(6m + 8)$

8. $-(3z + 4) = 6z - 3(3z + 2)$

9. Three times the sum of a number and 4 is 8 less than one-half the number. Write and solve an equation to find the number.

10. A square and a rectangle have the same perimeters. The length of a side of the square is $4x - 1$. The length of the rectangle is $2x + 1$ and the width is $x + 2$. Write and solve an equation to find x .

11. A movie club charges a one-time membership fee of \$25 which allows members to purchase movies for \$7 each. Another club does not charge a membership fee and sells movies for \$12 each. How many movies must a member purchase for the cost of the two clubs to be equal?