Lesson 4 Homework Practice

Solve Equations with Variables on Each Side

Solve each equation. Check your solution.

1. $9m + 14 = 2m$

2. $13x = 32 + 5x$

3. $8d - 25 = 3d$

4. $t - 27 = 4t$

5. $7p - 5 = 6p + 8$

6. $11z - 5 = 9z + 7$

7. $12 - 5h = h + 6$

8. $4 - 7f = f - 12$

9. $-6y + 17 = 3y - 10$
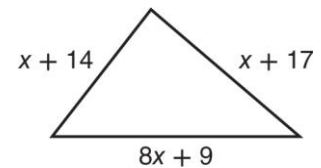
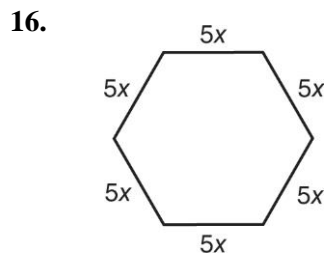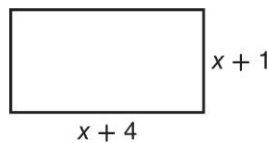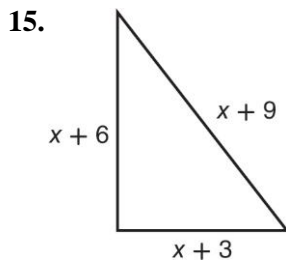**10.** $3x - 32 = -7x + 28$

11. $3.2a - 16 = 4a$

12. $16.8 - v = 6v$

Define a variable, write an equation, and solve to find each number.

13. Fourteen less than five times a number is three times the number.

14. Twelve more than seven times a number equals the number less six.

Write an equation to find the value of _x_ so that each pair of polygons has the same perimeter. Then solve.

15.

16.

Write and solve an equation to solve each exercise.

17. GOLF For an annual membership fee of $500, Mr. Bailey can join a country club that would allow him to play a round of golf for $35. Without the membership, the country club charges $55 for each round of golf. How many rounds of golf would Mr. Bailey have to play for the cost to be the same with and without a membership?

18. MUSIC Marc has 45 CDs in his collection, and Corinna has 61. If Marc buys 4 new CDs each month and Corinna buys 2 new CDs each month, after how many months will Marc and Corinna have the same number of CDs?

Lesson 4 Problem-Solving Practice

Solve Equations with Variables on Each Side

Write and solve an equation to solve each exercise.

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1. PLUMBING A1 Plumbing Service charges $35 per hour plus a $25 travel charge for a service call. Good Guys Plumbing Repair charges $40 per hour for a service call with no travel charge. How long must a service call be for the two companies to charge the same amount?

2. EXERCISE Mike's Fitness Center charges $30 per month for a membership. All-Day Fitness Club charges $22 per month plus an $80 initiation fee for a membership. After how many months will the total amount paid to the two fitness clubs be the same?

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3. SHIPPING The Lone Star Shipping Company charges $14 plus $2 a pound to ship an overnight package. Discount Shipping Company charges $20 plus $1.50 a pound to ship an overnight package. For what weight is the charge the same for the two companies?

4. MONEY Deanna and Lise are playing games at the arcade. Deanna started with $15, and the machine she is playing costs $0.75 per game. Lise started with $13, and her machine costs $0.50 per game. After how many games will the two girls have the same amount of money remaining?

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5. MONEY The Wayside Hotel charges its guests $1 plus $0.80 per minute for long distance calls. Across the street, the Blue Sky Hotel charges its guests $2 plus $0.75 per minute for long distance calls. Find the length of a call for which the two hotels charge the same amount.

6. COLLEGE Duke is a part-time student at Horizon Community College. He currently has 22 credits, and he plans to take 6 credits per semester until he is finished. Duke's friend Kila is also a student at the college. She has 4 credits and plans to take 12 credits per semester. After how many semesters will Duke and Kila have the same number of credits?