

Name: \_\_\_\_\_

## Solving Linear Equations: Variable on Both Sides

**Solve each equation.**

1)  $6r + 7 = 13 + 7r$

2)  $13 - 4x = 1 - x$

3)  $-7x - 3x + 2 = -8x - 8$

4)  $-8 - x = x - 4x$

5)  $-14 + 6b + 7 - 2b = 1 + 5b$

6)  $n + 2 = -14 - n$

7)  $n - 3n = 14 - 4n$

8)  $7a - 3 = 3 + 6a$

9)  $15 + 2x = x + 6$

10)  $-10 + x + 4 - 5 = 7x - 5$

11)  $-8n + 4(1 + 5n) = -6n - 14$

12)  $-6n - 20 = -2n + 4(1 - 3n)$

13) Container A and container B have leaks. Container A has 800 ml of water, and is leaking 6 ml per minute. Container B has 1000 ml, and is leaking 10 ml per minute. How many minutes,  $m$ , will it take for the two containers to have the same amount of water?

14) Bill weighs 120 pounds and is gaining ten pounds each month. Phil weighs 150 pounds and is gaining 4 pounds each month. How many months,  $m$ , will it take for Bill to weigh the same as Phil?

15) You play basketball in your school's indoor stadium. You have two payment options. Option A is to buy a membership card and pay \$2 each time you go to the gym. Option B is to pay \$4 each time you go. A membership card costs \$20. After how many times will the cost of Option A be equal to the cost of Option B?

