Name _____ Class _____ Date _____

Practice 2-4 Variables and Equations

Is the given number a solution of the equation?

1. $9k = 10 - k; -1$ _____

2. $-7r - 15 = -2r; -3$ _____

3. $3g \div (-6) = 5 - g; -10$ _____

4. $-3p = 4p + 35; -5$ _____

5. $8 - e = 2e - 16; 8$ _____

6. $5 - 15s = 8 - 16s; 3$ _____

7. $2(x - 2) - 5x = 5(2 - x); 7$ _____

8. $6a + 3 = 3(3a - 2); 4$ _____

Is each equation true, false, or an open sentence?

9. $14 = x - 9$

_____

10. $8 + 7 = 10$

_____

11. $4 - 15 = 22 - 33$

_____

12. $5 + x = 90 \div 9 + 4$

_____

13. $-7(5 - 9) = 19 - 3(-3)$

_____

14. $6(5 - 8) = 2(10 - 1)$

_____

Write an equation for each sentence. Is each equation true, false, or an open sentence.

15. One fifth of a number n is equal to -7.

_____

16. The product of 13 and -7 is -91.

_____

17. Fifty-four divided by six equals negative nine.

_____

18. Seven less than the product of a number z and 3 is equal to 4.

_____

Write an equation. Is the given value a solution?

19. A truck driver drove 468 miles on Tuesday. That was 132 miles farther than she drove on Monday. Let d represent the distance she drove on Monday. Did she drive 600 miles on Monday?

_____

Name _____ Class _____ Date _____

2-4 • Guided Problem Solving

GPS Student Page 82, Exercise 21

Write an equation. Is the given value a solution?

Weight A veterinarian weighs 140 lb. When she steps on a scale while holding a dog, the scale shows 192 lb. Let d represent the weight of the dog. Does the dog weigh 52 lb?

Read and Understand

1. How much does the veterinarian weigh? _____
2. What does the variable d represent? _____
3. How much do the dog and veterinarian weigh together? _____
4. What are you asked to do? _____

Plan and Solve

5. Write a variable expression to represent the total weight of the veterinarian and dog. _____
6. Write an equation in which the variable expression is equal to the scale weight of the veterinarian and dog. _____
7. Is the equation you wrote true, false, or an open sentence? _____
8. Substitute 52 for d in the equation. _____
9. Is the equation true or false? _____
10. Does the dog weigh 52 lb? _____

Look Back and Check

11. Subtract 52 lb from 192 lb. _____
    If the dog weighs 52 lb, the difference will be equal to the weight of the veterinarian.

Solve Another Problem

12. Drew has 32 trading cards. Together, Beth and Drew have 56 trading cards. Let b represent the number of trading cards Beth has. Write an equation to find out whether Beth has 25 trading cards.

_____