2-3

Practice

Form K

Solving Multi-Step Equations

Solve each equation. Check your answer.

1. $20 + g + g = 14$

2. $7 + 4x - 9 = -6$

3. $-12 = -5 - 6n + 11$

4. $t + 10 - 4t = -11$

5. $8 = 8p + 13 - 3p$

6. $4y - 16 + 8y = -4$

Write an equation to model each situation. Then solve the equation.

7. A plumber finished three jobs on Tuesday. The first two only cost the owner the $45 trip fee because they took very little time to complete. For the third job, the plumber charged the trip fee plus 6 times his hourly rate. If the plumber received a total of $303 for the day, what is the hourly rate?

8. Three times a number plus 12 minus 5 times the same number is 22. What is the number?

Solve each equation. Check your answer.

9. $4(-2d - 3) = 12$

10. $5(5t - 2) = -35$

11. $-2(a + 6) = -22$

12. $60 = 6(6 - 2n)$

13. $-14 = -4(9x - 1)$

14. $-(5z + 12) = 18$

2-3 | **Practice** (continued)

Form K

Solving Multi-Step Equations

15. Eli took the fleet of 8 vans for oil changes. All of the vans needed windshield wipers which cost $24 per van. The total bill was $432. Write an equation to find out what each oil change cost. Solve the equation.

Solve each equation. Choose the method you prefer. Check your answer.

16. $\dfrac{m}{3} + \dfrac{1}{3} = \dfrac{2}{3}$

17. $5r - \dfrac{1}{5} = \dfrac{4}{5}$

18. $\dfrac{w}{9} - 6 = \dfrac{7}{9}$

19. $1.75t - 4.5 = 7.75$

20. $6z + 0.36 = 24.72$

21. $7.85 - 2.15c = 20.75$

22. Writing Describe the first step you would take in solving $12 = 7 - 3x + 5x$. Explain.

23. Writing Describe how you would solve $-8 = \dfrac{1}{9}(-9t + 27)$.

Solve each equation. Round to the nearest hundredth if necessary.

24. $11 + \dfrac{4x}{-5} = \dfrac{2}{3}$

25. $\dfrac{5}{7}(k + 5) = -7$

26. Reasoning Can you solve the equation $\dfrac{3}{4}(6x + 9) = 14$ by using the Division Property of Equality? Explain.