2-1 Writing Equations

**Translate each sentence into an equation.**

21. The difference of \( f \) and five times \( g \) is the same as 25 minus \( f \).

\[ f - 5g = 25 - f \]

**ANSWER:**

23. Four times the sum of 14 and \( c \) is \( a \) squared.

\[ 4(14 + c) = a^2 \]

**ANSWER:**

25. **GARDENING** A flat of plants contains 12 plants. Yoshi wants a garden that has three rows with 10 plants per row. Write and solve an equation for the number of flats Yoshi should buy.

\[ 3 \cdot 10 = 12f \; \Rightarrow \; 2 \frac{1}{2} \text{ flats} \]

**ANSWER:**

27. Celsius temperature \( C \) is five ninths times the difference of the Fahrenheit temperature \( F \) and 32.

\[ C = \frac{5}{9}(F - 32) \]

**ANSWER:**

29. Simple interest is computed by finding the product of the principal amount \( p \), the interest rate \( r \), and the time \( t \).

\[ I = prt \]

**ANSWER:**

**Match each sentence with an equation.**

A. \( g^2 = 2(g - 10) \)

B. \( \frac{1}{2}g + 32 = 15 + 6g \)

C. \( g^3 = 24g + 4 \)

D. \( 3g^2 = 30 + 9g \)

40. One half of \( g \) plus thirty-two is as much as the sum of fifteen and six times \( g \).

**ANSWER:**

B

41. A number \( g \) to the third power is the same as the product of 24 and \( g \) plus 4.

**ANSWER:**

C

42. The square of \( g \) is the same as two times the difference of \( g \) and 10.

**ANSWER:**

A

43. The product of 3 and the square of \( g \) equals the sum of thirty and the product of nine and \( g \).

**ANSWER:**

D

44. **FINANCIAL LITERACY** Tim empties his bank, which contains quarters, dimes, and nickels. He has three more dimes than quarters and 6 fewer nickels than quarters. If he has 63 coins, write and solve an equation to find how many quarters Tim has.

\[ q + (3 + q) + (q - 6) = 63 \text{ or } 3q - 3 = 63 \; 22 \text{ quarters} \]

**ANSWER:**

45. **SHOPPING** Pilar bought 17 items for her camping trip, including tent stakes, packets of drink mix, and bottles of water. She bought 3 times as many packets of drink mix as tent stakes. She also bought 2 more bottles of water than tent stakes. Write and solve an equation to discover how many tent stakes she bought.

\[ 17 = t + 3t + (t + 2) \text{ or } 17 = 5t + 2 \; 3 \text{ tent stakes} \]

**ANSWER:**