

**2-1 Practice****Writing Equations****Translate each sentence into an equation.**

- Fifty-three plus four times  $b$  is as much as 21.  $53 + 4b = 21$
- The sum of five times  $h$  and twice  $g$  is equal to 23.  $5h + 2g = 23$
- One fourth the sum of  $r$  and ten is identical to  $r$  minus 4.  $\frac{1}{4}(r + 10) = r - 4$
- Three plus the sum of the squares of  $w$  and  $x$  is 32.  $3 + (w^2 + x^2) = 32$

**Translate each sentence into a formula.**

- Degrees Kelvin  $K$  equals 273 plus degrees Celsius  $C$ .  $K = 273 + C$
- The total cost  $C$  of gas is the price  $p$  per gallon times the number of gallons  $g$ .  $C = pg$
- The sum  $S$  of the measures of the angles of a polygon is equal to 180 times the difference of the number of sides  $n$  and 2.  $S = 180(n - 2)$

**Translate each equation into a sentence.**

- $r - (4 + p) = \frac{1}{3}r$   **$r$  minus the sum of 4 and  $p$  equals  $\frac{1}{3}$  times  $r$ .**
- $\frac{3}{5}t + 2 = t$  **Two more than  $\frac{3}{5}$  of  $t$  equals  $t$ .**
- $9(y^2 + x) = 18$  **9 times the sum of  $y$  squared and  $x$  is 18.**
- $2(m - n) = x + 7$  **Twice the quantity  $m$  minus  $n$  is  $x$  plus 7.**

**Write a problem based on the given information.**

- $a$  = cost of one adult's ticket to zoo  
 $a - 4$  = cost of one children's ticket to zoo  
 $2a + 4(a - 4) = 38$   
**Sample answer: The cost of two adult's tickets and 4 children's tickets to the zoo is \$38. How much is an adult's ticket?**
- $c$  = regular cost of one airline ticket  
 $0.20c$  = amount of 20% promotional discount  
 $3(c - 0.20c) = 330$   
**Sample answer: The cost of three airline tickets that are discounted 20% is \$330. What is the regular cost of a ticket?**
- GEOGRAPHY** About 15% of all federally-owned land in the 48 contiguous states of the United States is in Nevada. If  $F$  represents the area of federally-owned land in these states, and  $N$  represents the portion in Nevada, write an equation for this situation.  
 $0.15F = N$
- FITNESS** Deanna and Pietra each go for walks around a lake a few times per week. Last week, Deanna walked 7 miles more than Pietra.
  - If  $p$  represents the number of miles Pietra walked, write an equation that represents the total number of miles  $T$  the two girls walked.  $T = p + (p + 7)$
  - If Pietra walked 9 miles during the week, how many miles did Deanna walk? **16 mi**
  - If Pietra walked 11 miles during the week, how many miles did the two girls walk together? **29 mi**