

Define a variable, write an equation, and solve each problem. Then check your solution.

- 1) Twenty-three minus a number is 42. Find the number. \_\_\_\_\_
- 2) A number increased by 5 is equal to 34. Find the number. \_\_\_\_\_
- 3) What number decreased by 45 is -78? \_\_\_\_\_
- 4) The difference of a number and -23 is 35. Find the number. \_\_\_\_\_
- 5) A number increased by -45 is 77. Find the number. \_\_\_\_\_
- 6) The sum of a number and -35 is 98. Find the number. \_\_\_\_\_
- 7) Six times a number is -96. Find the number. \_\_\_\_\_
- 8) Negative twelve times a number is -156. What is the number? \_\_\_\_\_
- 9) One fourth of a number is -16.325. What is the number? \_\_\_\_\_
- 10) Four thirds of a number is 4.82. What is the number? \_\_\_\_\_
- 11) Seven eighths of a number is 14. What is the number? \_\_\_\_\_
- 12) Twelve decreased by twice a number is -7. What is the number? \_\_\_\_\_
- 13) One half of a number increased by 16 is four less than two thirds of the number. Find the number. \_\_\_\_\_
- 14) Find two consecutive integers whose sum is -31. \_\_\_\_\_
- 15) Find three consecutive odd integers whose sum is 21. \_\_\_\_\_
- 16) Twenty-nine is 13 added to 4 times a number. Find the number. \_\_\_\_\_
- 17) Find three consecutive integers whose sum is -33. \_\_\_\_\_
- 18) Find four consecutive integers whose sum is 86. \_\_\_\_\_
- 19) Find two consecutive odd integers whose sum is 196. \_\_\_\_\_
- 20) Twice the greater of two consecutive odd integers is 13 less than three times the lesser. Find the integers. \_\_\_\_\_
- 21) Three times the greatest of three consecutive even integers exceeds twice the least by 38. Find the integers. \_\_\_\_\_
- 22) One fifth of a number plus five times that number is equal to seven times the number less 18. Find the number. \_\_\_\_\_
- 23) The difference of two numbers is 12. Two fifths of the greater number is six more than one third of the lesser number. Find both numbers. \_\_\_\_\_
- 24) **Geometry** The measures of the angles of a triangle are given as  $6x^\circ$ ,  $(x - 3)^\circ$ , and  $(3x + 7)^\circ$ .  
What are the measures of each angle? \_\_\_\_\_
- 25) One of the congruent angles of an isosceles triangle measures  $37^\circ$ . Find the measures of the other angles. \_\_\_\_\_
- 26) Find the measure of an angle that is  $30^\circ$  less than its supplement. \_\_\_\_\_

- 27) One of the angles of a triangle measures  $53^\circ$ . Another angle measures  $37^\circ$ . What is the measure of the third angle? \_\_\_\_\_
- 28) One of two complementary angles measures  $30^\circ$  more than three times the other. Find the measure of each angle. \_\_\_\_\_
- 29) Find the measure of an angle that is one-half the measure of its supplement. \_\_\_\_\_
- 30) The measures of the angles of a triangle are given as  $x^\circ$ ,  $(3x)^\circ$ , and  $(4x)^\circ$ . What are the measures of each angle? \_\_\_\_\_
- 31) Twice a number increased by 12 is equal to 31 less than three times the number. Find the number. \_\_\_\_\_
- 32) Eight minus two multiplied by a number is equal to the number plus 17. Find the number. \_\_\_\_\_
- 33) Twice the greater of two consecutive odd integers is 13 less than three times the lesser. Find the integers. \_\_\_\_\_
- 34) The perimeter of a rectangle is 24 inches. Find the dimensions if its length is 3 inches greater than its width. \_\_\_\_\_
- 35) Find two consecutive odd integers whose sum is 116. \_\_\_\_\_
- 36) Find two consecutive even integers whose sum is 126. \_\_\_\_\_
- 37) Find three consecutive odd integers whose sum is 117. \_\_\_\_\_
- 38) Find two consecutive even integers whose sum is 217. \_\_\_\_\_
- 39) Find four consecutive odd integers whose sum is 8. \_\_\_\_\_
- 40) Find three consecutive even integers whose sum is 396. \_\_\_\_\_
- 41) An angle measures  $15^\circ$  more than its complement. What are the measures of the two angles? \_\_\_\_\_
- 42) One of the congruent angles of an isosceles triangle measure  $51^\circ$ . Find the measures of the other angles. \_\_\_\_\_
- 43) One of the angles of a triangle measures  $35^\circ$ . Another angle measures  $108^\circ$ . What is the measure of the third angle? \_\_\_\_\_
- 44) One of the two supplementary angles measures  $30^\circ$  more than twice the other. Find the measure of each angle. \_\_\_\_\_