

Translate each sentence into an equation with a variable for the unknown, then solve for the variable.

1. *Seven more than the product of three and a number is fifty-two.*
2. 6.5% of what is \$7.55 ?
3. A number multiplied by seven equals 154.
4. A number multiplied by 5.3 equals 345.56.

Each of these word problems has a problem sentence followed by a question. Solve these problems using algebra by these steps.

- a. Choose a variable to be the answer to the question.
  - b. Writing the sentence as an equation.
  - c. Solving the equation for the variable.
  - d. Answer the question.
5. A farm consisting of 160 acres is offered for sale at \$83,360. What is the average price per acre?
  6. The total expense for a picnic with 21 students is \$68.25. How much must each student contribute?
  7. Three-fifths of the cost of a certain car is \$6750. What is the cost of the car?
  8. Two percent of the cost of a building must be spent on fine art. If a sculpture is commissioned using all such funds, and the sculpture must cost exactly \$110,400, how much is the price of the building?

9. There are two numbers. The larger number is two more than the smaller number. The sum of the two numbers is twenty-eight. What are the two numbers?
10. There are two numbers. The larger number is seven times more than the smaller number. The sum of the numbers is forty. What are the numbers?
11. The perimeter of a rectangle is 54 feet. The length is three more than the width. What are the dimensions of the rectangle?
12. A field is six times as long as it is wide, and the distance around the field is 1610 feet. What are the dimensions of the field?
13. A bar has fixed costs of \$220 per day. Each beverage sold for \$3 costs \$1 in supplies. What is the break-even sales for beverages?