

## Translating Word Problems into Equations

1. Read the problem carefully and figure out what it is asking you to find.
2. Assign a variable to the quantity you are trying to find.
3. Write down what the variable represents.
4. Re-read the problem and write an equation for the quantities given in the problem.
5. Solve the equation.
6. Answer the question in the problem.
7. Check your solution.

Let's Practice:

1. When 6 is added to four times a number, the result is 50. Find the number.
2. If 4 is subtracted from twice a number, the result is 10 less than the number. Find the number.
3. Twice a number is added to the number and the answer is 90. Find the number.
4. The sum of a number and 9 is multiplied by -2 and the answer is -8. Find the number.
5. On an algebra test, the highest grade was 42 points higher than the lowest grade. The sum of the two grades was 138. Find the lowest grade.
6. At the end of the day, a pharmacist counted and found she has  $\frac{4}{3}$  as many prescriptions for antibiotics as she did for tranquilizers. She had 84 prescriptions for the two types of drugs. How many prescriptions did she have for tranquilizers?
7. In a given amount of time, Jamie drove twice as far as Rhonda. Altogether they drove 90 miles. Find the number of miles driven by each.
8. Karen works for \$6 an hour. A total of 25% of her salary is deducted for taxes and insurance. She is trying to save \$450 for a new car stereo and speakers. How many hours must she work to take home \$450 if she saves all of her earnings?
9. The length of a rectangular map is 15 inches and the perimeter is 50 inches. Find the width.
10. The perimeter of a triangular lot is 72 meters. One side is 16 meters, and the other side is twice the first side. Find the length of the third side.
11. The circumference of a circular clock face is 13.12 centimeters more than three times the radius. Find the radius of the face.
12. Karin's mom runs a dairy farm. Last year Betty the cow gave 375 gallons less than twice the amount from Bessie the cow. Together, Betty and Bessie produced 1464 gallons of milk. How many gallons did each cow give?
13. Jose has a board that is 44 inches long. He wishes to cut it into two pieces so that one piece will be 6 inches longer than the other. How long should the shorter piece be?
14. Paula received a paycheck of \$585. This amount reflects her weekly earnings less 10% of her earnings for deductions. How much was she paid before deductions were taken out?

## Two-Step Equation Word Problems

1) 331 students went on a field trip. Six buses were filled and 7 students traveled in cars. How many students were in each bus?

2) Aliyah had \$24 to spend on seven pencils. After buying them she had \$10. How much did each pencil cost?

3) The sum of three consecutive numbers is 72. What are the smallest of these numbers?

4) The sum of three consecutive even numbers is 48. What are the smallest of these numbers?

5) You bought a magazine for \$5 and four erasers. You spent a total of \$25. How much did each eraser cost?

6) Maria bought seven boxes. A week later half of all her boxes were destroyed in a fire. There are now only 22 boxes left. With how many did she start?

7) Sumalee won 40 super bouncy balls playing horseshoes at her school's game night. Later, she gave two to each of her friends. She only has 8 remaining. How many friends does she have?

8) Imani spent half of her weekly allowance playing mini-golf. To earn more money her parents let her wash the car for \$4. What is her weekly allowance if she ended with \$12?

9) Aliyah had some candy to give to her four children. She first took ten pieces for herself and then evenly divided the rest among her children. Each child received two pieces. With how many pieces did she start?

10) How old am I if 400 reduced by 2 times my age is 244?

11) Jill sold half of her comic books and then bought sixteen more. She now has 36. With how many did she begin?

12) For a field trip 4 students rode in cars and the rest filled nine buses. How many students were in each bus if 472 students were on the trip?

13) On Tuesday Shanice bought five hats. On Wednesday half of all the hats that she had were destroyed. On Thursday there were only 17 left. How many did she have on Monday?

14) The Cooking Club made some pies to sell at a basketball game to raise money for the new math books. The cafeteria contributed four pies to the sale. Each pie was then cut into five pieces and sold. There were a total of 60 pieces to sell. How many pies did the club make?