

Math 90
Problem Solving

Example: When 17 is subtracted from 5 times a certain number, the result is 73.
What is the number?

Define the variable: $x =$ the number

Translate from English to Algebra:

When 17 is subtracted from 5 times a certain number, the result is 73.
 17 is subtracted from $5x$ $= 73$
 $5x - 17$ $= 73$

Solve equation: $5x - 17 = 73$
 $5x = 90$
 $x = 18$

Check solution: When 17 is subtracted from 5 times 18, the result is 73.
 $5 \cdot 18 = 90$, $90 - 17 = 73$

Solution Sentence: The number is 18.

1. When 9 is added to four times a number, the result is 37. Find the number.
2. A 59 meter rope is cut into three pieces. The second piece is twice as long as the first. The third piece is 3 meters longer than the first. How long is each piece of rope?
3. The perimeter of a rectangle is 66 m. The width is 9 m less than the length. Find the length and the width of the rectangle.
4. The sum of three consecutive odd integers is 201. Find the integers.
5. The second angle of a triangle is twice as large as the first. The third angle is 60° less than the second. Find the measures of the angles. [Hint: What is the sum of all the angles of a triangle?]
6. After a 25% price reduction, a computer is on sale for \$288.75. What was the original price?