The product of two consecutive integers is 30. Find the integers.

Two consecutive odd integers are such that the square of the smaller is four less than five times the larger. Find the integers.

The sum of a number and its square is 12. Find the number.

One positive number is three times another number. The square of the larger number is two more than the square of the smaller number. Find the number.
The length of a rectangle is two miles less than three times the width. If the area of the rectangle is 20 square miles, then what are the dimensions of the rectangle?

The length of a rectangle is one foot more than three times the width. If the area of the rectangle is 10 square feet, then what are the dimensions of the rectangle?

The length of a rectangle is two feet more than the width. The area of the rectangle is numerically 4 more than the perimeter of the rectangle. Find the dimensions of the rectangle.

The perimeter of a square is numerically 12 times the area of the square. What is the numeric side length of the square?
If $T$ teams in a league each play every other team twice, then the total number of games $G$ is given by: $G = T^2 - T$. If a league has 240 games and each team plays each other twice, then how many teams are in the league?

The number of possible handshakes $H$ between $P$ people is: $H = \frac{1}{2}(P^2 - P)$. At a certain meeting, everyone shakes hands and there are a total of 66 handshakes. How many people were at the meeting?

The amount in micrograms $A$ of a certain medicine in the bloodstream, $t$ minutes after taking 200 micrograms, is approximated by: $A = -50t^2 + 200t$. After how many minutes will there be 150 micrograms of the medicine in the bloodstream?

The number $N$, in millions, of broadband cable and DSL subscribers in the United States, $t$ years after 1998, can be approximated by: $N = 0.3t^2 + 0.6t$. When will there be 36 million subscribers to broadband cable and DSL?