Quadratic Equation Applications

Applications

Find three consecutive integers such that the square of the smallest is 29 less than the product of the larger two.

Find three consecutive odd integers such that twice their sum is 9 less than the product of the smaller two.

MG has a rectangular flower bed that measures 4' by 6'. If she wants to increase the length and the width by the same amount to have a flower bed of 48 square feet, find the new dimensions.

If an object is dropped from a height of s_0 feet, then its altitude after t seconds is given by the formula $S = -16t^2 + s_0$. If a pack of emergency supplies is dropped from an airplane at a height of 1600 feet, find how long it takes for the object to reach the ground.

The base of a ski ramp forms a right triangle. One leg of the triangle is 2 meters longer than the other. If the hypotenuse is 10 meters, find the lengths of the legs.

Use the Pythagorean Theorem: $a^2 + b^2 = c^2$

That is … (length of first leg)^2 + (length of second leg)^2 =(length of hypotenuse)^2

The hypotenuse is the side opposite the right angle.

Chuck and Becky leave school to go home. Chuck drives due west while Becky drives due south. At 4:30 p.m. Becky is 3 miles farther from school than Chuck, and the distance between them is 6 miles more than Chuck's distance from school. Find Chuck's distance from school.