NAME:	HW 8.9
DATE:	ALGEBRA

- 1. Find two pair of consecutive odd integers whose product is 63.
- 2. The sum of the squares of two consecutive even integers is 164. Find the integers.
- 3. The square of 1 more than a number is equal to 4 more than 4 times the number. Find the number.
- 4. The sum of 3 times the square of a number and 6 times the number is equal to twice the square of that number, decreased by 8. Find the number.
- 5. Alice tosses a volleyball in the air. The function $h(t) = -16t^2 + 8t + 8$ represents the distance, in feet, that the ball is from the ground at any time *t*.
 - a. What is the maximum height of the ball?
 - b. After how many seconds is the ball at maximum height?
 - c. After how many seconds does the ball touch the ground?
- 6. Karen is on the beach and throws a seashell straight up. The equation that models that flight is $h(t) = -16t^2 + 96t$, where t is the time in seconds, and h(t) is the height.
 - a. What is the maximum height of the seashell?
 - b. How many seconds does it take for the seashell to reach maximum height?
 - c. For how many seconds is the seashell in the air?
- 7. The height of a baseball h(t) at time t, where $t \ge 0$ and where the ball is struck initially at 4 feet above the ground, is modeled by the equation $h(t) = -16t^2 + 64t + 4$.
 - a. After how many seconds is the ball at maximum height?
 - b. What is the maximum height of the baseball?
 - c. After how many seconds is the ball at a height of *exactly* 52 feet?