

1. A parachute jumper jumps out of a plane. The function $h = -16t^2 + 9225$ models the relationship between his height, h , above the ground and time in seconds, t . He wants to open his parachute when he is 7625 feet above the ground. How many seconds after he jumps should he open the parachute?

2. If the parachute jumper from question #1 has a faulty parachute that fails to open, how many seconds will it pass before he hits the ground?

3. Find the solutions to the equation $2x^2 + 10x - 28 = 0$

4. The height of a ball thrown into the air is modeled by the function $h = -16t^2 + 48t + 4$ where h represents height in feet and t represents time in the air. When will the ball be 4 feet in the air?

What is the maximum height of the ball?

How long did it take to reach that height?

After how many seconds did the ball hit the ground?