

Quiz Two

		Jeremy	Edwin
Section	11:30	CA	CC
(circle one)	12:30	CB	CD

No notes. No calculators.

Simplify your answers. Show your work. Please put a box around YOUR FINAL ANSWER. There are 15 points on this quiz.

Pat the parachutist is falling at a constant rate of 8 meters per second. She throws a ball to a friend on the ground so that the height of the ball (in meters) is given by the function

$$b(t) = -5t^2 + 10t + 100.$$

(Here t is in seconds, and $t = 0$ is the time when Pat throws the ball.)

- 1 (2 points) Find an equation describing Pat's height (in meters) as a function of time t (in seconds) since $t = 0$. (Hint: What is Pat's height at $t = 0$?)

- 2 (4 points) When is the ball 50 meters off the ground? (Simplify your answer to the point where someone with a calculator could compute it.)

3 (4 points) When, after $t = 0$, is the ball at the same height as Pat?

4 (5 points) When is the ball the greatest distance above Pat? (This question asks for the greatest distance above Pat, not above the ground.)