No calculators are allowed on this quiz. Please read each question carefully, follow directions and clearly mark your solutions. **Show your work for full credit.**

Many out of state students are coming to South Florida to enjoy their Spring Break and you are looking for an idea to make money. You heard that many people plan on renting a jet ski and you would like see how profitable it is to open a rental company.

You estimate that the fixed weekly cost (jet ski payment) is $125, and the variable cost per one rental (insurance and gas) is $22.

1. (3 pts) Let x represent the number of rentals per week. Write the weekly cost function, C, for your rental business.

2. (3 pts) You estimate that the weekly revenue (in dollars) is $R(x) = -0.01x^2 + 12x$. Find the weekly profit function, P. [Hint: The profit function is the difference between the revenue and cost functions.]

3. (4 pts) Use the profit function from 2. to determine the number of rentals that maximizes your revenue.

4. (2 extra pts) Draw a picture of yourself during a spring break.