

## Homework 4 (Max Points:100)

Due Date: October 8 by 11:59 pm EST

**Instructions:** Each response should be in a .py file. Submit all your code to

<https://submittity.cs.rpi.edu>

**Answer the following questions:**

1. Write code to compute the result, for a scenario when you are driving too fast and a police officer catches you. Output is encoded as an int value: 0=no ticket, 1=small ticket, 2=big ticket. If speed is 60 or less, the result is 0. If speed is between 61 and 80 inclusive, the result is 1. If speed is 81 or more, the result is 2. Unless it is your birthday -- on that day, your speed can be 5 higher in all cases. (30 points)

Hint: Write a function that takes speed and your birthday (Boolean) as arguments.

**Test Cases:**

caught\_speeding(60, False) → 0

caught\_speeding(65, False) → 1

caught\_speeding(65, True) → 0

2. Given a non-negative number "num", return True if num is within 2 of a multiple of 10.

Hint: (a % b) is the remainder of dividing a by b, so (7 % 5) is 2. (30 points)

**Test Cases:**

near\_ten(12) → True

near\_ten(17) → False

near\_ten(19) → True

3. Write a function that takes as input three variables(assume these to be integers or floating points), and returns the largest of the three. Do this without using the Python max() function! (40 points)