Economics 101 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Spring 2020

Quiz #3

2/20/20 TA/Discussion Section Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_

All quizzes will be graded on a 10 point scale: you will get two points simply by being on time to class and putting your name on the quiz for that day. The remaining eight points are based upon your answers to the quiz questions.

1. Suppose that you are told that the market for corn can be described by the following equations where P is the price per unit of corn and Q is the number of units of corn:

Market Demand curve for corn: P = 400 – (1/2)Q

Market Supply curve for corn: P = (3/4)Q

a. (6 points) Suppose the government implements a price floor in this market of $330 per unit of corn. Furthermore, suppose the government agrees to buy any surplus amount of the good that occurs at this price floor. Given this information and holding everything else constant, provide **numeric values** for each of the following **(make sure you include units of measurement in your answers)**:

i. Number of units of corn purchased by consumers given this price floor = \_\_\_\_\_\_\_\_\_\_\_\_\_

ii. Number of units of corn purchased by the government given this price floor = \_\_\_\_\_\_\_\_\_\_

iii. Consumer expenditure on corn given this price floor = \_\_\_\_\_\_\_\_\_\_\_\_\_

iv. Total revenue received by farmers of corn given this price floor = \_\_\_\_\_\_\_\_\_\_\_\_\_

**Show how you found your answers in the space below: correct answers without supporting work will receive no credit!**

b. (2 points) Suppose the government replaces the price floor program described in (a) with a price guarantee program. The government guarantees farmers a price of $330 per unit of corn. Farmers are told to produce with this guarantee in mind, then go out and sell their product at whatever price they can and then the government will provide the farmers with a subsidy so that their total price per unit of corn is equal to $330. Given this information and holding everything else constant, answer the following questions. Make sure you show the work you did to find your answers: no work, no credit!

i. Given the subsidy program described, what is the subsidy per unit that the government will pay to farmers? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii. What is the cost of this subsidy program to the government? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_