Economics 2
Spring 2019

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PROBLEM SET 5

DUE AT THE *BEGINNING* OF LECTURE ON THURSDAY, APRIL 18TH

You may work together on the problems, but your answers must be ***in your own words*** and ***handwritten***. You also must ***list the other students with whom you worked***.

For all questions be sure to explain your answers and to use graphs whenever appropriate.

1. Suppose a person will receive a payment of $1000 several years in the future.

- **a.** Use the concept of present value to explain why that future payment is worth less than $1000 today.
- **b.** In computing the present value, should the person be using the real or the nominal interest rate?

2. Suppose increased concerns about terrorism make firms less optimistic about the future marginal revenue products of capital.

- **a.** How will this development affect the investment demand curve?
- **b.** What will be the impact on the economy's normal real interest rate and normal investment?

3. Suppose that the components of planned aggregate expenditure (PAE) take the following specification:

$$C = 500 + 0.6Y$$
$$I^p = 500$$
$$G = 800$$
$$NX = 200$$

- **a.** Graph the expenditure line corresponding to this specification, the 45-degree line, and the equilibrium level of total output in the short run.
- **b.** Now solve the example algebraically to determine the equilibrium level of total output in the short run. (Think of the two equations represented in your diagram above: Y = PAE and PAE = f(Y). Substitute the second into the first and then solve for Y. If you need more help, see pp. 661–662 of the textbook.)
- **c.** Suppose that government purchases (G) decrease to 400. Show what will happen to total output in the short run both graphically and algebraically.

4. Suppose that consumers become permanently more confident, and so increase consumption at a given level of disposable income.

a. What will be the impact (if any) on output in the short run?

b. What will be the impact on the economy's normal real interest rate and normal investment?

5. If the marginal propensity to consume (MPC) rises, will the multiplier effect become bigger, smaller, or stay the same?