Homework #11

modifications of problems #3 and 6 from Ch. 19, p. 452 from Case/Fair *Principles…* (6th ed.)
problem #1, 4 and 5 from Ch. 20, p. 474 from Case/Fair *Principles…* (6th ed.)

3. The following questions refer to this table:

aggregate output	consumption	planned investment
2000	2100	300
2500	2500	300
3000	2900	300
3500	3300	300
4000	3700	300
4500	4100	300
5000	4500	300
5500	4900	300

a. At each level of output, calculate saving. At each level of output, calculate unplanned investment (inventory change). What is likely to happen to aggregate output if the economy were producing at each of the levels indicated? What is the equilibrium level of output?

b. Over each range of income (2000 to 2500, 2500 to 3000 and so on), calculate the marginal propensity to consume. Calculate the marginal propensity to save.

c. Suppose that planned investment increases by 200 and is sustained at that higher level. Recompute the table using the higher level of planned investment. (In recomputing the table, assume that neither the MPC nor the MPS change). What is the new equilibrium level of aggregate output?

6. You are given the following data concerning Freedonia, a legendary country:

(1) $C = 200 + 0.8 \cdot Y$ the consumption function
(2) $I = 100$ the investment function
(3) $AE \equiv C + I$ planned aggregate expenditure
(4) $AE = Y$ the equilibrium condition

a. What is the marginal propensity to consume in Freedonia? What is the marginal propensity to save?

b. Graph equations (3) and (4) and solve for equilibrium income.

c. Calculate the saving function for Freedonia. Plot this saving function on a graph with equation (2). Explain why equilibrium income in this graph must be the same as in part **b.**

d. Suppose equation (2) were changed to $(2')$ $I = 110$. What is the new equilibrium level of income? By how much does the \$10 increase in planned investment change equilibrium income? What is the value of the multiplier?

(continued on the next page)

1. Suppose that the government of Lumpland is enjoying a fat budget surplus with fixed government expenditures of $G = 150$ and fixed taxes of $T = 200$. Assume that consumers of Lumpland behave as described in the following consumption function:

$$C = 150 + 0.75 \cdot (Y - T)$$

Suppose further that investment spending is fixed at $I = 100$.

a. Calculate the equilibrium level of GDP in Lumpland. Solve for the equilibrium levels of Y, C and S.

b. Next assume that the Republican Congress in Lumpland succeeds in reducing taxes by 20 to a new fixed level of $T = 180$. Recalculate the equilibrium level of GDP using the tax multiplier.

c. Solve for the equilibrium levels of Y, C and S after the tax cut and check to ensure that the multiplier worked.

d. What arguments are likely to be used in support of such a tax cut? What arguments might be used against the tax cut?

4. Crack economists in the economy of Yuk estimate the following:

	billion yuks
real output/income	1000
government purchases	200
total taxes	200
planned investment spending	100

Assume that Yukkers consume 75 percent of their disposable incomes and save 25 percent.

a. You are asked by the business editor of the Yuk Gazette to predict the events of the next few months. By using the data given, can you make a forecast? (Assume that investment is constant).

b. If no changes were made, at what level of GDP would the economy settle?

c. Some local conservatives blame Yuk's problems on the size of the government sector. They suggest cutting government purchases by 25 billion yuks. What effect would such cuts have on the economy? Be specific.

5. On July 3, 1997, the new government of Prime Minister Tony Blair in Great Britain passed its first budget in Parliament. The top budget priority was a tax cut for business that gave British businesses the lowest tax rate of any Western industrialized country. To offset the business tax cut were a number of tax increases including higher consumption taxes and a windfall tax on profits from privatized utilities. Overall, the result was slightly higher government spending and an increase in tax revenues that exactly matched the spending increase. Would you expect such a package to increase or decrease British GDP? Explain.