QUESTIONS & PROBLEMS

An asterisk denotes a harder question. [Web] indicates that the question requires access to the Internet.

1. TRUE/FALSE/UNCERTAIN

a. The largest component of GDP is consumption.

b. Government spending, including transfers, was equal to 18% of GDP in 1998.

c. The propensity to consume has to be positive, but beyond that it can take on any positive value.

d. Fiscal policy describes the choice of government spending and taxes, and is treated as exogenous in our goods market model.

e. The equilibrium condition for the goods market states that consumption equals output.

f. An increase of one unit in government spending leads to an increase of one unit in equilibrium output.

2. A SIMPLE ECONOMY

Suppose that the economy is characterized by the following behavioral equations:

$$C = 160 + 0.6Y_D$$
$$\bar{I} = 150$$
$$G = 150$$
$$T = 100$$

Solve for

a. equilibrium GDP (Y)

b. disposable income (Y_D)

c. consumption spending (C)

3. THE CONCEPT OF EQUILIBRIUM

For the economy in question 2,

a. Assume output is equal to 900. Compute total demand. Is it equal to production? Explain.

b. Assume output is equal to 1,000. Compute total demand. Is it equal to production? Explain.

c. Assume output is equal to 1,000. Compute private saving. Is it equal to investment? Explain.

4. THE U.S. ECONOMY

a. For the economy in question 2, compute each component of demand as a percentage of GDP. Are your results roughly consistent with the 1998 composition of U.S. GDP?

b. Consider the decline in real GDP during the 1990–1991 recession as presented in the box "Consumer Confidence and the 1990 1991 Recession." From the beginning of the period in question to the worst point in the recession, what was the decline in GDP in percentage terms?

***c.** By how much should c_0 in question 2 decrease in order to achieve the same percentage change in equilibrium GDP as the one you reported in part (b)?

***d.** In terms of units (i.e. *not* in percentage terms), is the decrease in c_0 required in part (c) greater or less than the decrease in output that it causes? Why?

5. THE BALANCED BUDGET MULTIPLIER

For both political and macroeconomic reasons, governments are often reluctant to run budget deficits. Here we examine whether policy changes in G and T that maintain a balanced budget are macroeconomically neutral. Put another way, we examine whether it is possible to affect output through changes in G and T so that the government budget remains balanced. Start with equation (3.7).

a. By how much does Y increase when G increases by one unit?

b. By how much does Y decrease when T increases by one unit?

c. Why are your answers to (a) and (b) different?

Suppose that the economy starts with a balanced budget: $T = G$. If the increase in G is equal to the increase in T, then the budget remains in balance. Let us now compute the balanced budget multiplier.

d. Suppose that both G and T increase by exactly one unit. Using your answers to parts (a) and (b), what is the change in equilibrium GDP? Are balanced budget changes in G and T macroeconomically neutral?

***e.** How does the propensity to consume affect your answer? Why?

*6. AUTOMATIC STABILIZERS

So far in this chapter we have been assuming that the fiscal policy variable T is independent of the level of income. In the real world, however, this is not the case. Taxes typically depend on the level of income, and so tend to be higher when income is higher. In this problem we examine how this automatic response of taxes can help re-