1. Use the IS-LM model to predict the effects of each of the following shocks on income, the interest rate, consumption, and investment. In each case, explain what the Fed should do to keep income at its initial level.
   a. After the invention of a new high-speed computer chip, many firms decide to upgrade their computer systems.
   b. A wave of credit-card fraud increases the frequency with which people make transactions in cash.
   c. A best-seller titled “Retired Rich” convinces the public to increase the percentage of their income devoted to saving.

2. Consider the following economy.
   a. The consumption function is given by \( C = 200 + 0.75(Y - T) \). The investment function is \( I = 200 - 25r \). Government purchases and taxes are both 100. For this economy, graph the IS curve for \( r \) ranging from 0 to 8.
   b. The money demand function is \((M/P)d = Y - 100r\). The money supply \( M \) is 1,000 and the price level \( P \) is 2. For this economy, graph the LM curve for \( r \) ranging from 0 to 8.
   c. Find the equilibrium interest rate \( r \) and the equilibrium level of income \( Y \).
   d. Suppose that government purchases are raised from 100 to 150. How much does the IS curve shift? What are the new equilibrium interest rate and level of income?
   e. Suppose instead that the money supply is raised from 1,000 to 1,200. How much does the LM curve shift? What are the new equilibrium interest rate and level of income?
   f. With the initial values for monetary and fiscal policy, suppose that the price level rises from 2 to 4. What happens? What are the new equilibrium interest rate and level of income?
   g. Derive and graph an equation for the aggregate demand curve. What happens to this aggregate demand curve if fiscal or monetary policy changes, as in parts (d) and (e)?

3. Suppose that the government wants to raise investment but keep output constant. In the IS-LM model, what mix of monetary and fiscal policy will achieve this goal? In the early 1980s, the U.S. government cut taxes and ran a budget deficit while the Fed pursued a tight monetary policy. What effect should this policy mix have?