3. How does each of the following changes affect the real gross domestic product and price level of an open economy in the short run? Explain each.

   (a) An increase in the price of crude oil, an important natural resource

   (b) A technological change that increases the productivity of labor

   (c) An increase in spending by consumers

   (d) The depreciation of the country's currency in the foreign exchange market

3. Gala Land produces three final goods: bread, water, and fruit. The table above shows this year's output and price for each good.

   (a) Calculate this year's nominal gross domestic product (GDP).

   (b) Assume that in Gala Land the GDP deflator (GDP price index) is 100 in the base year and 150 this year. Calculate each of the following.

      (i) The inflation rate, expressed as a percentage, between the base year and this year

      (ii) This year's real GDP

   (c) Since the base year, workers have received a 20 percent increase in their nominal wages. If workers face the same inflation that you calculated in part (b)(i), what has happened to their real wages? Explain.

   (d) If the GDP deflator in Gala Land increases unexpectedly, would a borrower with a fixed-interest-rate loan be better off or worse off? Explain.

1. Suppose that the United States economy is in a deep recession.

   (a) Using a correctly labeled aggregate demand and aggregate supply graph, show the equilibrium price level and real gross domestic product.

   (b) There is a debate in Congress as to whether to decrease personal income taxes by a given amount or to increase government purchases by this amount. Which of these two fiscal policies will have a larger impact on real gross domestic product? Explain.

   (c) Explain how a decrease in personal income taxes will affect each of the following in the short run.

      (i) Consumption

      (ii) Real gross domestic product and the price level

      (iii) Imports

      (iv) Exports

   (d) Explain the mechanism by which an increase in net investment will cause each of the following to change.

      (i) Aggregate demand

      (ii) Long-run aggregate supply