CHAPTER 11: SECTION 3

Real GDP

The Two Variables of GDP: P and Q

- GDP is calculated by multiplying the price of goods produced (P) by the quantity produced (Q).
- If either price or quantity rises, the GDP will rise.
- If price is held constant, then any rise in GDP must be due to a rise in quantity.

- How do we keep price constant? Economists do it by choosing the price in a **base year** and then comparing it with prices in all other years. For example, they may choose 1987 as their base year, and then compare prices in 2003, 2004, and 2005 against prices in 1987. (See Transparency 11-3.)
- When economists compute GDP by using comparison to a base year, they are said to be computing **real GDP**.
  - GDP is equal to price in the current year multiplied by quantity in the *current* year.
  - Real GDP is equal to price in the base year multiplied by quantity in the *current* year.

TRANSPARENCY 11-3: Computing GDP and Real GDP in a Simple, One-Good Economy

Real GDP is computed using prices from a base year and applying those prices to quantities produced.

(1) Year	(2) Price of watches	(3) Quantity of watches produced	(4) GDP	(5) Real GDP
1987	$20	—	Price in current year × Quantity in current year	Price in 1987 × Quantity in current year
2003	$50	1,900	$50 × 1,900 = $95,000	$20 × 1,900 = $38,000
2004	$60	2,000	$60 × 2,000 = $120,000	$20 × 2,000 = $40,000
2005	$70	1,855	$70 × 1,855 = $129,850	$20 × 1,855 = $37,100

Back