Chapter 23

1. a. Complete the following table.

	Type 1	Type 2	Type 3
Gross Domestic Product	4,532	4,804	
Consumption		3,320	3,544
Investment	589	629	673
Government Purchases	861		977
Net Exports	–45	–58	–54

Answer:

	Type 1	Type 2	Type 3
Gross Domestic Product	4,532	4,804	5,140
Consumption	3,127	3,320	3,544
Investment	589	629	673
Government Purchases	861	913	977
Net Exports	–45	–58	–54

b. What is the largest expenditure component of GDP?

Answer:
Consumption

c. Does investment include the purchase of company shares and bonds? Why?

Answer:
No, because that transaction is a purchase of an asset, not a purchase of currently produced capital goods.

d. Do government purchases include government spending on unemployment benefit? Why?

Answer:
No, because unemployment benefits are expenditures for which the government receives no production in return they are referred to as 'transfer payments'.

e. What does it mean to say that net exports are negative?

Answer:
It means that the value of imports exceed the value of exports.

2. Suppose the base year in the following table is 2009.

Year	Production of X	Price per Unit of X
2009	20 units	€5
2010	20 units	€10
2011	20 units	€20

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a. What is nominal GDP for 2009, 2010, and 2011?

Answer: €100, €200, €400

b. What is real GDP for 2009, 2010, and 2011?

Answer: €100, €100, €100

3. Suppose the following table records the total output and prices for an entire economy. Further, suppose the base year in the following table is 2009.

Year	Price of Soda	Quantity of Soda	Price of Jeans	Quantity of Jeans
2009	€1.00	200	€10.00	50
2010	€1.00	220	€11.00	50

a. What is the value of nominal GDP in 2009?

Answer: €700

b. What is the value of real GDP in 2009?

Answer: €700

c. What is the value of nominal GDP in 2010?

Answer: €770

d. What is the value of real GDP in 2010?

Answer: €720

e. What is the value of the GDP deflator in 2009?

Answer: 100

f. What is the value of the GDP deflator in 2010?

Answer: 107

g. From 2009 to 2010, prices rose approximately what percentage?

Answer: (107 – 100)/100 = 0.07 = 7%

h. Was the increase in nominal GDP from 2009 to 2010 mostly due to an increase in real output or due to an increase in prices?

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Answer:
Percent increase in nominal GDP = (€770 – €700)/700 = 0.10 = 10%. Percent increase in prices = 7%, therefore most of the increase was due to prices.

4. Complete the following table.

Year	Nominal GDP	Real GDP	GDP deflator
1		€100	100
2	€120		120
3	150	125	

Answer:

Year	Nominal GDP	Real GDP	GDP deflator
1	€100	€100	100
2	120	100	120
3	150	125	120

a. What year is the base year? How can you tell?

Answer:
Year 1, because the deflator = 100.

b. From year 1 to year 2, did real output rise or did prices rise? Explain?

Answer:
Prices rose 20 percent and real output stayed the same.

c. From year 2 to year 3, did real output rise or did prices rise? Explain?

Answer:
Prices stayed the same and real output rose 25 percent.

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