

EXERCISE 1

Given are the following data on outputs and inputs of three productive sectors A, M, and O of the economy of Simplicia (data are in billions of dollars):

<u>Sector A</u>	* output:	-	to Sector M	:	30
		-	to Sector O	:	20
		-	final uses	:	70
	* intermediate imports			:	10
	* wages and salaries paid			:	35

<u>Sector M</u>	* output	-	to Sector A	:	20
		-	to Sector O	:	40
		-	final uses	:	40
	* intermediate imports			:	20
	* wages and salaries paid			:	10

<u>Sector O</u>	* output	-	to Sector A	:	35
		-	to Sector M	:	25
		-	final uses	:	35
	* intermediate imports			:	0
	* wages and salaries paid			:	20

Questions:

1. Calculate the value of the operating surplus for each sector.
2. Calculate the value of the domestic product of the economy.
3. Calculate the value of the domestic income of the economy.
4. Check that: value of domestic product = value of domestic income.

EXERCISE 2

Given are the following data for an economy (in billions of dollars):

-	Final consumption expenditure		
	- by households	-	80
	- by government	-	20
-	Investments		
	- in fixed assets	-	45
	- in stocks	-	5
-	Exports	-	30
-	Imports	-	20
-	Intermediate output	-	60
-	Depreciation	-	30
-	Indirect taxes	-	13
-	Subsidies	-	3
-	Factor income from abroad		
	- wages and salaries	-	7
	- property and entrepreneurial income	-	15
-	Other current transfers from abroad	-	12
-	Other current transfers to abroad	-	2
-	Capital transfers from abroad	-	7
-	Capital transfers to abroad	-	3

Calculate the values of the following concepts:

- a.
 - 1. Domestic product/income, gross, at market prices
 - 2. Domestic product/income, net, at market prices
 - 3. Domestic product/income, gross, at factor prices
 - 4. Domestic product/income, net, at factor prices

- b.
 - 1. National product/income, gross, at market prices
 - 2. National product/income, net, at market prices
 - 3. National product/income, gross, at factor prices
 - 4. National product/income, net, at factor prices

- c.
 - 1. National disposable income, gross, at market prices
 - 2. National disposable income, net, at market prices

EXERCISE III

Given are the following data for the three main productive sectors of the economy of Progressia:

	<u>I</u>	<u>II</u>	<u>III</u>
Intermediate output	50	25	10
Consumer products	80	70	60
Investment goods	0	50	0
Exports	30	40	20
Intermediate inputs	35	45	20
Wages and salaries	65	90	40
Interest and rents	25	10	5

- A. Calculate the following for each productive sector:
1. the operating surplus, gross, at market prices
 2. the value added, gross, at market prices
 3. the profits, gross, at market prices
- B. Construct a production account for each productive sector
- C. Aggregate the production accounts for the three productive sectors to one single production account for the economy
- D. Calculate the value of the intermediate imports
- E. Calculate the Domestic Product according to the equation
Dom. Product = Final output – Intermediate Imports
- F. Calculate the Domestic Income according to the equation
Dom. Income = Wages and salaries + Operating surplus (gross, market prices)

EXERCISE IV

Given are the following data (in billions of dollars) for a closed economy, i.e. an economy without transactions with the rest of the world:

Intermediate output produced/sold by enterprises		
- to enterprises	:	50
- to government	:	5
Consumer goods produced/sold by enterprises (to households)	:	60
Investment goods produced/sold by enterprises (to enterprises)	:	25
Wages and salaries paid by enterprises	:	45
Net indirect taxes paid by enterprises	:	4
Depreciation by enterprises	:	10
Property and entrepreneurial income paid by enterprises to households	:	20
Wages and salaries paid by government	:	15
Direct taxes paid by households	:	10
Direct taxes paid by enterprises	:	5
Current transfers from government to households	:	7

Questions:

Construct the following accounts:

1. a production account for
 - the sector 'enterprises' and the sector 'government'
 - the economy as a whole
2. an income-outlay account for
 - the sector 'enterprises'; the sector 'government'; and the sector 'households'
 - the economy as a whole
3. a capital account for
 - the sector 'enterprises'; the sector 'government'; and the sector 'households'
 - the economy as a whole

EXERCISE V

Given are the following data (in billions of dollars) for an open economy, i.e. an economy having transactions with the rest of the world:

Private final consumption expenditure	50
Government final consumption expenditure	10
Investments in stocks	3
Investments in fixed assets	15
Exports of goods and services	8
Imports of goods and services	12
Indirect taxes	7
Subsidies	4
Depreciation	5
Wages and salaries paid by domestic producers	
* to HH	43
* to ROW	2
Wages and salaries received by HH from abroad	1
Distributed profits received by HH from ENT	15
Interest received by HH from GOVT	1
Dividends and interest received by HH from ROW	3
Interest received by ENT from GOVT	2
Dividends and interest received by ENT from ROW	4
Distributed profits received by GOVT from ENT	2
Dividends and interest received by ROW from ENT	1
Direct taxes	
* paid by HH	10
* paid by ENT	4
Other current transfers received by HH	
* from GOVT	6
* from ROW	1
Other current transfers received by GOVT	
* from ROW	3
Other current transfers received by ROW	
• from HH	2

HH = households sector; ENT = Enterprises sector; GOVT = Government sector; ROW = Rest of World

Questions:

Construct the following accounts:

1. a production account for the economy
2. an income-outlay account for the household sector
3. an income-outlay account for the enterprises sector
4. an income-outlay account for the government sector
5. an income-outlay account for the economy
6. a capital account for the economy
7. an external account for the economy

EXERCISE GDP INDICES

Given are the following data, (in billions of dollars) for an economy Y.

	<u>Base year 0</u>	<u>year T</u>	<u>year T</u>
		Const. prices	Curr. prices
Private Final Consumption expenditure	120	250	450
Government Final Consumption expenditure	60	110	198
Investments in stocks	15	40	72
Investments in fixed assets	45	80	144
Exports of goods and services	30	55	99
Imports of goods and services	20	35	63

- Calculate the values of: GDP in the base-year; GDP in year T at constant prices; GDP in year T at current prices.
- Calculate the value of the Implicit GDP Deflator for year T.
- Calculate the value of the Real Product Index for year T.