

The Digital Economist

Principles of Macroeconomics

Worksheet #6: **Income Determination**

Name: _____

1. Given the following equations:

$C = 200 + 0.80Y_d$	Consumption Expenditure
$I = 500$	Investment Expenditure
$G = 200$	Government Expenditure
$NX = X - M$	Net Export Expenditure
$X = 100$	Exports
$M = 0.05Y$	Imports (the marginal propensity to import = 0.05)
$Y_d = Y - T$	Disposable Income
$T = 0.10$	Tax Revenue (tax rate = 10%)
$AE = C + I + G + NX$	Aggregate Expenditure
$Y = AE$	Equilibrium condition

a. Calculate the level of Autonomous Expenditure 'A0': _____

b. Derive an expression for the spending multiplier 'α':

c. Calculate the equilibrium level of income and fill in the blanks in the left-hand column below:

<i>Before</i>	<i>After</i>
I = : _____	_____
G = : _____	_____
X = : _____	_____
S = : _____	_____
T = : _____	_____
M = : _____	_____

Financial Sector Balance: _____

Foreign Sector Balance: _____

Government Budget Balance: _____

Recalculate the equilibrium level of income for an increase in autonomous exports of 50 ($X' = 150$) and fill in the blanks on the right. *How does this shock affect the balances in the different sectors of the economy?* Graph these results on a separate sheet of paper.