

# Economics HL Formula Booklet

For assistance during the course and NOT during  
the examinations. First examinations 2014

Edited in 2019 (Version 2)  
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## Topic I— Microeconomics (Theory of The Firm)

Total Cost (TC)	TC = Total Fixed Costs + Total Variable Costs or TC = Average Costs × Quantity
Total Fixed Cost (TFC)	TFC = Total Cost - Total Variable Costs or TFC = Average Fixed Costs × Quantity
Total Variable Costs (TVC)	TVC = Total Cost - Total Fixed Costs or TVC = Average Variable Costs × Quantity
Average Cost (AC)	AC = $\frac{\text{Total Cost}}{\text{Quantity}}$ or Average Fixed Costs + Average Variable Costs
Marginal Cost (MC)	MC = $\frac{\Delta \text{Total Cost}}{\Delta \text{Quantity}}$
Average Product (AP)	AP = $\frac{\text{Total Product}}{\text{Quantity of Labor}}$
Marginal Product (MP)	MP = $\frac{\Delta \text{Total Product}}{\Delta \text{Quantity of Labor}}$
Total Revenue (TR)	TR = Price × Quantity
Average Revenue (AR)	AR = $\frac{\text{Total Revenue}}{\text{Quantity}}$ = Price
Marginal Revenue (MR)	MR = $\frac{\Delta \text{Total Revenue}}{\Delta \text{Quantity}}$
Profit	Profit = Total Revenue - Total Cost
Supernormal Profit	Average Revenue > Average Cost

Subnormal Profit	Average Revenue < Average Cost
Profit Maximization	Marginal Cost = Marginal Revenue
Revenue Maximization	Marginal Revenue = 0
Normal Profit, Sales Maximization Point, Economic Break-even Point, Entry Limit Price	Average Cost = Average Revenue
Allocative Efficiency	Demand = Supply, MSB = MSC, P = MC
Productive Efficiency	Minimum Point on Average Cost Curve, AC = MC
X Efficiency	At Any Point on Average Cost Curve
Dynamic Efficiency	Long Run Supernormal Profit
Minimum Efficient Scale	Lowest Quantity Level when AC Stops Decreasing
Shutdown Condition	Average Revenue < Average Variable Costs
Average Utility	$\frac{\text{Total Utility}}{\text{Quantity}}$
Marginal Utility	$\frac{\Delta \text{ Total Utility}}{\Delta \text{ Quantity}}$
Utility Maximization	Marginal Utility = 0
Social Cost	Private Costs + External Costs
Social Benefit	Private Benefit + External Benefit
Profit Maximization in Labor Market	Marginal Revenue Product = Marginal Cost of Labor

## Topic 1—Microeconomics (Elasticities)

<b>PED</b>	Price Elasticity of Demand	$\frac{\% \Delta \text{ Quantity Demanded}}{\% \Delta \text{ Price}}$
<b>PES</b>	Price Elasticity of Supply	$\frac{\% \Delta \text{ Quantity Supplied}}{\% \Delta \text{ Price}}$
<b>XED</b>	Cross Elasticity of Demand	$\frac{\% \Delta \text{ Quantity Supplied of Good}}{\% \Delta \text{ Price of Good B}}$
<b>YED</b>	Income Elasticity of Demand	$\frac{\% \Delta \text{ Quantity Demanded}}{\% \Delta \text{ Income}}$

## Topic 2—Macroeconomics

<b>GDP</b>	Gross Domestic Product	<p>Output Method: Sum of All Goods &amp; Services Produces in an Economy in a Year.</p> <p>Income Method: Sum of Factor incomes (Interest, Wages &amp; Salary, Rent, Profit)</p> <p>Expenditure Method: Total Spending in an Economy in a Year = Consumer Expenditure (C) + Investment (I) + Government Spending (G) + Net Exports(Exports - Imports)=(X-M) = C+I+G+(X-M)</p>
	Nominal GDP	Quantity Goods and Services Produced × Current Prices
	Real GDP	<p>Quantity Produced × Constant Prices or</p> $\frac{\text{Nominal GDP}}{\text{Price Index}^*} \times 100$ <p>*any price index: CPI, RPI, GDP Deflator</p>
	GDP Deflator	$\frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$
	GNI	GDP + Net Factor Income
	Green GDP	GDP - Environmental Costs
	Aggregate Demand	C + I + G + (X-M)
	GDP Per Capita	$\frac{\text{GDP}}{\text{Total Population}}$
<b>M</b>	Multiplier	$\frac{1}{1-MPC} \quad \text{or} \quad \frac{1}{1-MPW^*}$ <p>*marginal propensity of leakages = marginal propensity to save + marginal propensity to import + marginal propensity to tax</p>
<b>UR</b>	Unemployment Rate	$\frac{\text{Unemployed}^*}{\text{Labor Force}^{**}}$ <p>*Actively searching for a job but don't have one (definition of unemployment)</p> <p>**Employed + Unemployed*</p>

<b>IDX</b>	Index Number	$\frac{\text{Current Value}}{\text{Raw Value (In Base Year)}} \times 100$
<b>%Δ</b>	Percentage Change	$\frac{\text{Actual} - \text{Original}}{\text{Original}} \times 100$

## Topics 3 & 4— International & Development Economics

Gini Coefficient	$\frac{\text{Area Between Lorenz Curve and Line of Perfect Equality (A)}}{\text{Area Beneath Line of Perfect Equality (A+B)}}$
Martial Learner Condition	$\text{PED}(\text{exports}) + \text{PED}(\text{imports}) > 1$
Terms of Trade	$\frac{\text{Average Index Price of Exports}}{\text{Average Index Price of Imports}} \times 100$
Taxable Income	$\text{Total Income Earned} - \text{Tax Free Allowance}$
Average Rate of Tax	$\frac{\text{Total Income Tax Paid}}{\text{Total Income}} \times 100$
Marginal Rate of Tax	$\frac{\Delta \text{Total Income Tax Paid}}{\Delta \text{Total Income}} \times 100$