## MAKE ME THE SUBJECT



## **MICROECONOMICS**

Price elasticity of demand       PED = $\frac{600}{60}$ $600$	Name	Main formula	Rearrangements needed
$ \begin{array}{c} \text{Income elasticity} \\ \text{of demand} \end{array} \qquad \begin{array}{c} \text{YED} = \frac{\omega \Delta D}{\omega \Delta Y} \\ \text{W} \Delta D = \text{YED} \times \omega \Delta Y \\ \text{W} \Delta Y = \omega \Delta D \div \text{YED} \\ \end{array} $ $ \begin{array}{c} \text{XED} = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \frac{\omega \Delta Q d_A}{\omega \Delta P_B} \\ \text{W} \Delta P_B = \omega$		$PED = \%\Delta Qd$	$\Delta Qd = PED \times \Delta P$
		%ΔΡ	$%\Delta P = %\Delta Qd \div PED$
		$YED = \%\Delta D$	$\%\Delta D = YED \times \%\Delta Y$
of demand $\%\Delta P_B$ $\%\Delta P_B = \%\Delta Q d_A \div XED$ Price elasticity of supply       PES = $\%\Delta Qs$ $\%\Delta Qs = PES \times \%\Delta P$ $\%\Delta P$ $^*$ <td><u></u>%ΔΥ</td> <td><math>\%\Delta Y = \%\Delta D \div YED</math></td>		<u></u> %ΔΥ	$\%\Delta Y = \%\Delta D \div YED$
Price elasticity of supply  PES = %ΔQS	_	$XED = \%\Delta Qd_A$	$\%\Delta Qd_A = XED \times \%\Delta P_B$
Of supply% $\Delta P$ % $\Delta P$ = % $\Delta Qs \div PES$ Consumption externalitiesMSB = MPB + MEBMPB = MSB - MEBProduction externalitiesMSC = MPC + MECMPC = MSC - MECProfitProfit = Total Revenue - Total CostsTR = Profit + Total CostsTC = TR - ProfitRevenueTR = Price x QuantityPrice = TR / QQ = TR / PProfit per unitProfit per unit = AR - ACAR = Profit per unit + ACAverage RevenueAR = TR / QTR = AR x Q	of demand	%ΔP <sub>B</sub>	$\Delta P_{\rm B} = \Delta Q d_{\rm A} \div XED$
Consumption externalities  MSB = MPB + MEB  MFB = MSB - MEB  MEB = MSC - MEC  MFC = MSC - MEC  MEC = MSC - MPC  Profit  Profit = Total Revenue - Total Costs  TR = Profit + Total Costs  TC = TR - Profit  TR = Price x Quantity  Price = TR / Q  Q = TR / P  Profit per unit  Profit per unit = AR - AC  AR = Profit per unit + AC  AC = AR - Profit per unit  Average Revenue  AR = TR / Q  TR = AR x Q	_	$PES = \%\Delta Qs$	$\%\Delta Qs = PES \times \%\Delta P$
Production externalities  MSC = MPC + MEC  MPC = MSC - MEC  MEC = MSC - MPC  Profit  Profit = Total Revenue - Total Costs  TR = Profit + Total Costs  TC = TR - Profit  Price = TR / Q  Q = TR / P  Profit per unit  Profit per unit = AR - AC  AR = Profit per unit + AC  AC = AR - Profit per unit  Average Revenue  AR = TR / Q  TR = AR x Q		<u>%ΔP</u>	$\%\Delta P = \%\Delta Qs \div PES$
Production externalities  MSC = MPC + MEC  MPC = MSC - MEC  MEC = MSC - MPC  Profit  Profit = Total Revenue - Total Costs  TR = Profit + Total Costs  TC = TR - Profit  Profit per unit  Profit per unit = AR - AC  AR = Profit per unit + AC  AC = AR - Profit per unit  Average Revenue  AR = TR / Q  TR = AR x Q		MSB = MPB + MEB	MPB = MSB - MEB
Profit       Profit = Total Revenue - Total Costs       TR = Profit + Total Costs         TC = TR - Profit       TC = TR - Profit         Revenue       TR = Price x Quantity       Price = TR / Q         Q = TR / P       Q = TR / P         Profit per unit       Profit per unit = AR - AC       AR = Profit per unit + AC         AVerage Revenue       AR = TR / Q       TR = AR x Q	externalities		MEB = MSB - MPB
Profit Profit = Total Revenue – Total Costs  TR = Profit + Total Costs  TC = TR – Profit  Revenue  TR = Price x Quantity  Price = TR / Q  Q = TR / P  Profit per unit  Profit per unit = AR – AC  AR = Profit per unit + AC  AC = AR – Profit per unit  Average Revenue  AR = TR / Q  TR = AR x Q		MSC = MPC + MEC	MPC = MSC - MEC
Revenue $TC = TR - Profit$ $TR = Price x Quantity$ $Price = TR / Q$ $Q = TR / P$ Profit per unit $Profit Profit $	externalities		MEC = MSC - MPC
Revenue $TR = Price \times Quantity$ $Price = TR / Q$ $Q = TR / P$ Profit per unit $Q = TR / P$ Profit per unit $Q = TR / P$ Average Revenue $Q = TR / Q$ $Q = TR / P$ Average Revenue $Q = TR / Q$ <th>Profit</th> <th>Profit = Total Revenue – Total Costs</th> <th>TR = Profit + Total Costs</th>	Profit	Profit = Total Revenue – Total Costs	TR = Profit + Total Costs
Profit per unit  Profit per unit = AR – AC  AR = Profit per unit + AC  AC = AR – Profit per unit  Average Revenue  AR = TR / Q  TR = AR x Q			TC = TR - Profit
Profit per unit     Profit per unit = AR - AC     AR = Profit per unit + AC       AC = AR - Profit per unit       Average Revenue     AR = TR / Q     TR = AR x Q	Revenue	TR = Price x Quantity	Price = TR / Q
Average Revenue $AR = TR/Q$ $TR = AR \times Q$			Q = TR / P
Average Revenue $AR = TR/Q$ $TR = AR \times Q$	Profit per unit	Profit per unit = AR – AC	AR = Profit per unit + AC
			AC = AR - Profit per unit
O TO (AD	Average Revenue	AR = TR / Q	$TR = AR \times Q$
Q = IR / AR			Q = TR / AR

Name	Main formula	Rearrangements needed
Marginal	$MR = \Delta TR / \Delta Q$	$\Delta TR = MR \times \Delta Q$
Revenue		$\Delta Q = \Delta TR / MR$
Total cost	TC = TVC + TFC	TVC = TC - TFC
		TFC = TC - TVC
Average total	ATC = TC / Q	$TC = ATC \times Q$
cost		Q = TC / ATC
Average fixed	AFC = TFC / Q	TFC = AFC x Q
cost		Q = TFC / AFC
Average variable	AVC = TVC / Q	$TVC = AVC \times Q$
cost		Q = TVC / AVC
Average product	AP = Total Output / No. of workers	Total output = AP x no of workers
(= output per person, or productivity)		No of workers = Total output / AP
Marginal cost	$MC = \Delta TC / \Delta Q$	$\Delta TC = MC \times \Delta Q$
		$\Delta Q = \Delta TC / MC$

## **MACROECONOMICS**

Name	Main formula	Rearrangements needed
Real GDP	Real GDP = Nominal GDP x 100 Inflation Index	Nominal GDP = Real GDP x Inflation index / 100 Inflation index = Nominal GDP / Real GDP x 100
GDP per capita	GDP per capita = total GDP / population	Total GDP = GDP per capita x population Population = total GDP / GDP per capita
Unemployment rate	Unemployment rate = no. of unemployed / labour force pop'n	No. of unemployed = unemployment rate     x labour force pop'n  Labour force pop'n = no. of unemployed /     unemp rate
Aggregate demand	AD = C + I + G + (X - M)	C = AD - I - G - (X - M) $I = AD - C - G - (X - M)$ $G = AD - C - I - (X - M)$ $X = AD - C - I - G + M$ $M = C + I + G + X - AD$

Name	Main formula	Rearrangements needed
Investment	Net investment = Gross investment - depreciation	Gross investment = net investment + depreciation
		Depreciation = Gross investment – net investment
Multiplier	Multiplier = 1 / (1 - MPC)	MPC = 1 - (1 / multiplier)
Multiplier	Multiplier = 1 / MPW	MPW = 1 / multiplier
National income	Change in NI = multiplier x injection	Injection = change in NI / multiplier
		Multiplier = change in NI / injection
Terms of trade	ToT = index of X prices / index of M prices x 100	Index of X prices = ToT x index of M prices / 100
	<b>.</b>	Index of M prices = Index of X prices / ToT x 100
<b>Relative unit</b>	RULC = total labour costs / total output	Total labour costs = RULC x total output
labour costs		Total output = total labour / RULC