

1. <b>Linear Demand Function</b>	<p><math>Q_d = a - bP</math></p> <p>"Qd" is quantity demanded, "a" is the Qd at Price "o", "b" is the slope of the demand curve and "P" is Price</p> <p>There is a "-" sign to show that the demand curve has a inverse relationship....Price goes up, QD fall and vice versa</p>	8. <b>Income Elasticity of Demand YED</b>	$YED = \frac{\% \Delta \text{Quantity Demanded}}{\% \Delta \text{Income (Y)}}$
2. <b>Linear Supply Function</b>	<p><math>Q_s = b - cP</math></p> <p>"Qs" is quantity supplied, "b" is the Qs at Price "o", "c" is the slope of the supply curve, and "P" is Price</p> <p>There is a "+" sign to show that the supply curve has a Positive relationship....Price goes up, Qs increases and vice versa.</p>	9. <b>Price Elasticity of Supply PES</b>	$PES = \frac{\% \Delta \text{Quantity Supplied}}{\% \Delta P}$
3. <b>Linear Functions and effects due to indirect taxes</b>	<p>The Supply curve will shift inwards as cost of production increases. Less Qs at all price levels. This is demonstrated by doing such to the equation:</p> <p><math>Q_s = 6 - 4P</math> Assume the taxes is \$1 per unit</p> <p><math>Q_s = 6 - 4(P + 1)</math> plus one represents the addition of a tax onto the price. (Always use the + sign for indirect taxes. )</p> <p><math>Q_s = 2 - 4P</math> If you graph this you will now notice the S curve has shifted outwards as Qs at "o" was 6 and now is 2.</p>	10. <b>Cross Price Elasticity of Demand (XED)</b>	$XED = \frac{\% \Delta Q_d \text{ of Good A}}{\% \Delta P \text{ of Good B}}$
4. <b>Linear Functions and effects due to subsidies</b>	<p>The Supply curve will shift outwards as cost of production decreases. More Qs at all price levels. This is demonstrated by doing such to the equation:</p> <p><math>Q_s = 6 - 4P</math> Assume the taxes is \$1 per unit</p> <p><math>Q_s = 6 - 4(P - 1)</math> the "minus one" represents the reduction of a costs for the firm and would change according to the amount of subsidy. (Always use the - sign for indirect taxes.)</p> <p><math>Q_s = 10 - 4P</math> If you graph this you will now notice the S curve has shifted outwards as Qs at "o" was 6 and now is 10.</p>	11. <b>Calculate Average Variable Cost</b>	Total variable costs/ Q
5. <b>Linear Functions and the effect of an increase in demand</b>	<p>You would change the demand function accordingly. For example if the function is <math>Q_d = 75 - 2P</math> and there is an increase in demand (meaning a shift to the right) by 25 units at all price levels then the equation would in turn change to <math>Q_d = 100 - 2P</math> because you would increase the Qd a Price "o" by the amount of 25.....so 75 becomes 100 units demand at price "o".</p>	12. <b>Calculate Break Even Price</b>	It is the price that meets Average Total Cost
6. <b>Percentage Change Equation</b>	$\% \Delta = \frac{\text{new} - \text{original}}{\text{original}} \times 100$	13. <b>Calculate Profits</b>	Revenue - Costs
7. <b>Price Elasticity of Demand PED</b>	$PED = \frac{\% \Delta \text{Quantity Demanded}}{\% \Delta P}$	14. <b>Calculate Shut Down Price</b>	It is the price that meets Average Variable Costs
		15. <b>Calculate Consumer Surplus</b>	Calculate the triangle by using the area of a triangle equation $\frac{1}{2} \text{Base} \times \text{Height}$ . In this case base is the quantity and height is the amount in price over the equilibrium.
		16. <b>Calculate the Surplus when a minimum price is set.</b>	Use the linear supply and demand functions to plug in the minimum price. This will give you Qd and Qs at this price. The difference between the two numbers is the surplus.
		17. <b>Calculate the Shortage when a maximum price is set.</b>	Use the linear supply and demand functions to plug in the maximum price. This will give you Qd and Qs at this price. The difference between the two numbers is the shortage.
		18. <b>Calculate Total Fixed Costs</b>	Total fixed costs is always the same regardless of the quantity.
		19. <b>Calculate Marginal Revenue</b>	$MR = \frac{\text{Change in TR}}{1 \text{ unit increase in } Q}$ $= \frac{\Delta TR}{\Delta Q}$ $= \text{slope of TR curve}$
		20. <b>Calculate Revenue</b>	P x Q
		21. <b>Calculate Revenue Maximization</b>	It is where MR= 0, or where PED is equal to 1. Use PxQ to see how much that actually is.

22. <b>Calculate Profit at Profit Maximization</b>	Where MC= MR. Depending on where Average Total Costs are in relation to the Price/ Average Revenue, one can determine how much profit or loss the company is making.	36. <b>Calculate National Income</b>	You may use one of three methods..income, expenditure or output methods.
23. <b>Calculate Average Revenue</b>	Total Revenue/ Q	37. <b>Calculate Aggregate Demand</b>	Consumption (c) + Investment (I) + Gov. Spending (G) + (Export Revenue (X) - Import Expenditure (m) )
24. <b>Calculate Marginal Cost</b>	$MC = \frac{\Delta Total Cost}{\Delta Output}$		
25. <b>Calculate Tax Revenue</b>	Amount of tax one must pay per unit x quantity demand and supplied by the new equilibrium.		
26. <b>Calculate the amount of Subsidy given by government.</b>	Amount of subsidy given by gov. per unit x by the amount being demanded and supplied at the new equilibrium		
27. <b>Calculate the Producer Tax Burden</b>	How much of the tax the producer must pay due to the tax x the new equilibrium quantity.		
28. <b>Calculate the Consumer Tax Burden</b>	How much of the tax the consumer must pay due to the tax x the new equilibrium quantity.		
29. <b>Average Fixed Costs</b>	Total fixed costs / Quantity		
30. <b>Economic Growth Rate</b>	$\text{Econ. Growth Rate} = \frac{\text{Real GDP in Year 2} - \text{Real GDP in Year 1}}{\text{Real GDP in Year 1}} \times 100$		
31. <b>Multiplier Effect</b>	$1 / 1 - (\text{Marginal Propensity to Consume MPC})$		
32. <b>Calculate Real GDP when given Nominal GDP and the Price Deflator</b>	Nominal Real GDP / Price Deflator		
33. <b>Price Deflator</b>	Price Deflator = (Nominal GDP / Real GDP) x 100		
34. <b>Calculate Real GDP when given output of the country and the price deflator index.</b>	Multiply quantity produced in a country for the year by the prices from the base year.		
35. <b>Calculate the inflation rate between the two years if you are given two years' GDP Price deflators</b>	Find the % change in the GDP deflator price indexes between the years given.		

1. <b>Average Fixed Costs</b>	Total fixed costs / Quantity	14. <b>Calculate Revenue</b>	$P \times Q$
2. <b>Calculate Aggregate Demand</b>	Consumption (c) + Investment (I) + Gov. Spending (G) + (Export Revenue (X) - Import Expenditure (m) )	15. <b>Calculate Revenue Maximization</b>	It is where $MR = 0$ , or where PED is equal to 1. Use $P \times Q$ to see how much that actually is.
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36. **Price Elasticity of Demand PED**  $PED = \frac{\% \Delta \text{Quantity Demanded}}{\% \Delta P}$

37. **Price Elasticity of Supply PES**  $PES = \frac{\% \Delta \text{Quantity Supplied}}{\% \Delta P}$