AP Macro Formula sheet

GDP

* GDP = total value of all final goods and services produced by an economy in a given year
* GDP = C + I + G + (X-M) or C + I + G + Xn
* Not counted in GDP are illegal activities, government transfer payments (social security, welfare, veterans benefits, etc.) sale of used goods, financial payments (bonds, stocks)
* GDP is also refereed to as Output, or Y
* GDP per Capita = GDP/population
* Real GDP (adjusted for inflation)
* Nominal GDP = current dollars
* Nominal – Inflation = Real
* GDP Price index (deflator) = nominal GDP x 100

Real GDP

* Real GDP = \_\_\_\_\_\_\_\_nominal \_\_\_\_\_\_\_\_\_\_

price index (deflator) in hundredths

* Price index = market basket in a specific year x 100

Market basket in a base year

Consumer Price Index

* CPI = Recent market basket in a specific year

Market basket in a base year x 100

* Rate of Inflation = Current CPI – Previous CPI

Previous CPI x 100

Marginal Propensity to Consume and Save

* MPC = ∆C/∆DI MPS = ∆S/∆DI or 1-mpc
* MPC + MPS = 1
* APC = C/DI APS = S/DI

Simple spending multiplier

* 1/1-mpc or 1/mps
* Government multiplier 1/1-mpc or 1/mps
* Tax multiplier = -MPC/MPS or make it 1 less than the multiplier and negative
* SPENDING MULTIPLIER

MPC MULTIPLIER

.5 = 2X

.6 = 2.5 X

.75 = 4X

.8 = 5X

.9 = 10X

* ∆GDP = change in spending (C, I, or G) x the Multiplier
* ∆GDP = change in taxes (C, I, or G) x the Tax Multiplier (always negative)
* An increase in taxes change is a positive number x negative multipiier = decrease in GDP
* Shift in AE will be down.
* A decrease in taxes = change is a negative number x negative multiplier = increase in GDP
* Shift in AE will be up.

\*\*\*Spending from a tax break is less then spending because we spend less of our tax break.

Unemployment Rate

* Civilian Labor Force = Unemployed + Employed
* UR = number of unemployed x 100

Labor Force

* LFPR = Civilian labor force

Civilian (non- institutionalized ) Adult population x 100

* ER = Employed

Civilian Non – institutionalized Population x 100

* U and E have different denominators and cannot be added together with the expectation of getting 100 percent.
* The Civilian Non-Institutionalized Population is everyone over the age of 16, not in the military or other institution (such as a mental hospital or prison)
* To be considered unemployed a person must be actively looking for work in the past 4 weeks.
* Natural Unemployment Rate –varies over time and is the amount of unemployment due to structural and frictional unemployment
* Full Employment is w hen the economy is operating at its natural rate of unemployment, but never 100 percent.

Types of Unemployment

Cyclical – due to a recession, downturn in the economy

Structural – skills of worker does not match needs of the economy

Frictional – voluntary between jobs, looking for first job

Seasonal – seasonal employment

Money Multiplier

* 1/rr x ∆Fresh deposits of money = ∆Money supply
* 10% rr = 10x
* 5% rr = 20x
* 20% rr = 5x
* 15% rr = 6.67 x

What is money

* M1 = currency, checkable deposits, travelers checks
* M2 = all of M1 and CDs lower than 100,000
* M3 = all of M2 and CDs above 100,000

Velocity of Money

* Velocity is number of times money is used in the economy

MV = P \* Q

M = money supply

V = velocity of money

P = Overall price level

Q = Quantity or Real GDP

PL \* Real GDP = Nominal GDP