

Principle of Macroeconomics

- 1) Explain difference between Absolute advantage and Comparative advantage.

Absolute Advantage

The ability to produce a good using few inputs than another producers

The comparison among produced of a good according to their productivity

Comparative Advantage

The ability to produce a good at a lower opportunity cost than another producers

Compares producers of a good according to their opportunity cost

2)

	Hours to make		Amount produced in 1 hr	
	Beer	Pizza	Beer	Pizza
Pat	4 hr	2 hr	$\frac{1}{4} = 0.25$	$\frac{1}{2} = 0.5$
Kris	6 hr	4 hr	$\frac{1}{6} = 0.167$	$\frac{1}{4} = 0.25$

a) Opportunity Cost

	1 Gallon Beer	1 pizza
Pat	$\frac{0.5}{0.25} = 2 \text{ pizzas}$	$\frac{0.25}{0.5} = 0.5 \text{ gallons}$
Kris	$\frac{0.25}{0.167} = 1.5 \text{ pizzas}$	$\frac{0.167}{0.25} = 0.67 \text{ beer}$

Pat has absolute cost advantage in making pizza as he can make 1 pizza in only 2 hours while Kris needs 4 hours

Pat has a comparative advantage in making pizza because he has lower opportunity cost of making pizza than Kris.

b) Pat will trade away pizza in exchange for root beer because he has a comparative advantage in making pizzas.

c) The highest price of pizza would be $2/3 = 0.67$ gallons of root beer. If the price is higher than that Kris will prefer to make his own pizza.

The lowest price of pizza would be $1/2 = 0.5$ gallons of root beer. If the price is lower than that then Pat will prefer to make his own root beer since O/C of making gallon of root beer would be lower than trade price.

3) Year	Price of Milk	Quantity of Milk	Price of Honey	Quantity of Honey
2010	\$1	100 quarts	\$2	50 quarts
2011	\$1	200	\$2	100
2012	\$2	200	\$4	100

a) Calculating Nominal GDP

$$2010: (\$1 \text{ per qt. of milk} \times 100 \text{ quart}) + (\$2 \text{ per qt. of honey} \times 50 \text{ quart}) = \$200$$

$$2011: (\$1 \times 200) + (\$2 \times 100) = \$400$$

$$2012: (\$2 \times 200) + (\$4 \times 100) = \$800$$

Calculate Real GDP (base year 2010)

$$2010: (\$1 \times 100) + (\$2 \times 50) = \$200$$

$$2011: (\$1 \times 200) + (\$2 \times 100) = \$400$$

$$2012: (\$1 \times 200) + (\$2 \times 100) = \$400$$

GDP Deflator

$$2010: (\$200 / \$200) \times 100 = 100$$

$$2011: (\$400 / \$400) \times 100 = 100$$

$$2012: (\$800 / \$400) \times 100 = 200$$

b) % change in N. GDP in 2011 =

$$[(400 - 200) / 200] \times 100\% = 100\%$$

% change in N. GDP in 2012 =

$$[(800 - 400) / 400] \times 100\% = 100\%$$

% change in Real GDP

$$2011: [(400 - 200) / 200] \times 100\% = 100\%$$

$$2012: [(400 - 400) / 400] \times 100\% = 0\%$$

1. change in GDP deflator

$$2011: [(100 - 100) / 100] \times 100 = 0\%$$

$$2012: [(200 - 100) / 100] \times 100 = 100\%$$

Economic rise more in 2011 because in 2011 real gdp is 100% whereas 0% in 2012

4) Explain nominal and real interest rate and relation.

Nominal Interest Rate - The interest rate as usually reported without a correction for the effects of inflation.

Real Interest Rate - The interest rate as corrected for the effects of inflation.

Real Interest Rate = Nominal Interest rate - Inflation rate

5)

	Tennis Ball		Golf ball		Bottles of Gatorade	
	Price	Quantity	Price	Quantity	Price	Quantity
2011	\$2	100	\$4	100	\$1	200
2012	\$2	100	\$6	100	\$2	200

% change in price

$$\text{Tennis ball: } ((2 - 2) / 2) \times 100 = 0\%$$

$$\text{Golf ball: } ((6 - 4) / 4) \times 100 = 50\%$$

$$\text{Bottle of Gatorade: } ((2 - 1) / 1) \times 100 = 100\%$$

b) Cost of market basket in year 2011
 $= (2 \times 100) + (4 \times 100) + (1 \times 200) = \800

Cost of market basket in year 2012
 $= (2 \times 100) + (6 \times 100) + (2 \times 200) = \1200

% change in cost of market basket from
2011 to 2012 =

$$= [(1200 - 800) / 800] \times 100 = 50\%$$

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