

1.1 Stock variable

- Inventories
- Money supply
- Wealth
- Population
- Capital

1.2 Flow variable

- Change in Inventories
- Change in Money supply
- National Income
- Expenditure
- Interest

2. GDP is total market value of G&S in country

GNP is total market value of G&S only citizens

(both in country and in abroad)

China will have higher GNP than The US because they have more population than the US

3. The canned apple has 5 stages of production as follows. Find the value added of each stage and the GDP value of the canned apple.

Stages of Production Value of Sales Value Added

Growing Apple	12	} 3
Pickling	15	
Canning	18	} 3
Shipping	20	
Retail Sale	22	} 2

$$3 + 3 + 2 + 2 = 10$$

$$\text{GDP} = 10$$

4. • Transfer Payment ÷ government payments to people e.g. welfare
- because gov. didn't buy anything just give money to people but if people use this money to buy something so it is include in GDP

5. Real GDP is calculated by using the prices of a selected year and adjust for the price change

e.g. 2021 $P = 10$ $Q = 5$

2020 $P = 8$ $Q = 10$

GDP of 2021 nominal GDP = 50

real GDP with 2020 as the base year

$$8 \times 5 = 40$$

6. Real GDP = Nominal GDP

GDP Deflator = 100

7. • Decreasing of crime not reflected in GDP

- GDP does not count unreported / illegal income
- Non-market & Domestic activities are not counted in GDP

8. - The citizens bought 8 new cars, each worth 50\$. - consumption

- The citizens bought 4 new houses, each worth 150\$. - investment

- The citizens grew rice for their own consumption. The rice was worth 500\$. - investment

- The firms bought 6 used machines, each worth 50\$. - investment

- The firms bought 8 car parts, each worth 25\$. - investment

- The government bought 4 new computers, each worth 50\$. - government spending

- The government paid 1000\$ to the poor as welfare payment. - transfer payment

- The citizens bought 10 imported ships, each worth 100\$. - Net exports

- The firms sold 4 planes abroad, each worth 200\$. - Net exports

$$GDP = C + I + G + (X - M)$$

$$= 900 + 600 + 500 + 300 + 200 + 200 + (800 - 100)$$

$$= 2000$$

2018 GDP is 2,000

2012 base yr.

9.

Year	Price of A	Quantity of A	Price of B	Quantity of B	Price of C	Quantity of C
2012	1	3	2	3	3	3
2013	3	1	4	2	1	4
2014	2	2	3	4	2	1
2015	4	4	1	1	4	2

Year	Nominal GDP	Real GDP	GDP Deflator
2012	$3+6+9 = 18$	$3+6+9 = 18$	100
2013	$3+8+4 = 15$	$1+4+12 = 17$	88.2
2014	$4+2+2 = 8$	$2+8+3 = 13$	138.5
2015	$6+1+8 = 15$	$4+2+6 = 12$	208.3

$$\text{inflation rate from 2014 - 2015} = \frac{138.5 - 208.3}{138.5} = -50.4\%$$

$$10. \text{ GNP} = 8000 + 250 - 300 = 7950$$

$$\text{NNP} = 7950 - 900 = 7050$$

$$11.1 \text{ Gross domestic investment} = 2203.2 + 784 = 2987.2$$

$$11.2 \text{ GDP} = 2203.2 + 784 + 716.8 + (212.8 - 235.2) = 3681.6$$

$$11.3 \text{ GNP} = 3,681.6 + 35.2 - 68.8 = 3,648$$

$$11.4 \text{ NNP} = 3,648 - 168 = 3,480$$

$$11.5 \text{ NI} = 3,480$$

$$12. \text{ GDP} = 9500 + 3000 + 3200 + (850 - 900) = 15650$$