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① Multiply quantity $\times$ market price for each final good/service.

<u>Item</u>	<u>quantity</u>	<u>Price</u>	<u>Value (in billion)</u>
Automobiles	1,000,000	\$ 10,000	\$ 10.0 B
Clothing outfits	5,000,000	\$ 100	\$ 0.5 B
Food (pounds)	10,000,000	\$ 2	\$ 0.02 B
Dwelling units	2,000,000	\$ 200,00	\$ 400 B
Attorney services	1,000,000 hrs	\$ 50/hr	\$ 0.05 B
Medical services	2,000,000 hrs	\$ 30/hr	\$ 0.06 B
Wheat	20,000,000 bushes	\$ 1	\$ 0.02 B
National services	3,000,000 hrs	\$ 30/hr	\$ 0.09 B

• Add all values

$$\begin{aligned} & \$10.0B + \$0.5B + \$0.02B + \$400B + \$0.05B + \$0.06B + \$0.02B + \\ & \$0.09B = \text{Total Nominal GDP} = 410.14 \text{ billion.} \end{aligned}$$

② No.

A rise in nominal GDP from \$5,000 billion to \$5,500 billion does not necessarily mean that aggregate production, income or job opportunities increased.

Because,

- Nominal GDP is affected by price changes (inflation)
- Real GDP is needed to measure actual growth in

output. So the increase could simply be due to higher price, not more production.

- ③ GDP measures the market value of all final goods & services produced in an economy. If we include intermediate goods as well GDP becomes overestimated.

Reason: Double counting

Intermediate goods are goods used to produce final goods.

If we count both.

* The value of the final product

* The value of all intermediate goods used to make it.
then we are counting the same production multiple times.

- ④ Given;

→ Total market value of all sales [including intermediate goods] = \$ 10,000 billion.

→ Market value of intermediate goods = \$ 6,000 billion.

Formula:

Value added (GDP) = Total sales - Intermediate goods

Calculation:

$$10,000 \text{ billion} - 6,000 \text{ billion} = 4,000 \text{ billion}$$

- ⑤ To find gross private domestic investment use GDP expenditure formula.

$$GDP = C + I + G + NX$$

• $GDP = \$ 4,500 \text{ billion}$

- Consumption (C) = \$ 3,000 billion
- Government purchase (G) = \$ 1,000 billion.
- Net exports (NX) = 0

Substitute into the formula

$$4,500 = 3000 + I + 1000 + 0$$

$$4,500 = 4,000 + I$$

$$I = 4,500 - 4,000 = \$ 500 \text{ billion}$$

Gross private domestic investment = 500 billion dollars

⑥ Government purchases (the G in GDP) only include the value of goods & services the government actually buys or produces such as:

- Salaries of government workers
- Military equipment
- Public education services
- Infrastructure (roads, bridges).

But total government expenditures include many other types of spending that do not represent the purchase of goods or services. These extra expenditures are not counted in GDP because they do not reflect current production.

Example:

- ① Social security payments
- ② Unemployment Benefits
- ③ Welfare payments.
- ④ Interest on national debts.

Therefore, Government purchases (\$815 billion) are less than total government expenditures (\$1400 billion).