

ECO 311 — Homework 0

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March 8, 2018

1 Wheat and Bread

1. Calculate GDP

- Value Added: $50 \cdot \$3 + (50 \cdot \$2 - 20 \cdot \$3) = \190 inventory is value added
- Expenditure: $C + G + I + NX = \$115 + 0 + \$15 + \$75 - \$15 = \$190$ inventory is investment
- Income: $(\$50 + \$20) + ((\$45 \cdot 3 - \$50 + 5 \cdot \$3) + (\$100 - \$20 - \$60)) = \$190$
inventory counts towards profits because they profited 5 bushels which are valued at \$3 each

2 Coal and Steel

1. Determine GDP

- Value Added: $15 \cdot \$5 + \$20 \cdot 10 - 25 \cdot \$5 = \150
- Expenditure: $8 \cdot \$20 + (NX = 2 \cdot \$20 - 10 \cdot \$5) = \150
- Income: $\$50 + (15 \cdot \$5 - \$50) + \$40 + (10 \cdot \$20 - \$40 - 25 \cdot \$5) = \150

2. Determine current account surplus and deficit: \$0

$$CA = NX + NFP = -\$10 + \$0$$

3. Determine GNP: \$150

4. Determine GNP and GDP when the coal producer is owned by foreigners

- GDP: does not change — \$150
- GNP: $\$150 - \$25 = \$125$ subtracting profits of the coal producer

3 A Few Short Questions

1. Jim profits \$100 and contributes \$1100 to GDP.
2. Acme profits $1000 \cdot \$30 - \$10000 - \$15000 - \$200 = \$4800$ and contributes \$15000 to GDP.
3. Government contributes \$1 million to GDP.
4. Private savings
 $\text{Total Savings} = \text{Private Savings} + \text{Gov Savings}$
 $\$200 = PS - \50
 $\text{Private Savings} = \250
5. Investment
 $I + CA = S$
 $I = (S = \$200) - (CA = -\$100) = \$300$