National Income Accounting Problem #4
Solution Key

a) Since $NX = X - Im$, $Im = X - NX = 74 - (-15) = 89$.

b) Since Corporate Profit = Dividends + Retained Earnings + Corporate Income Tax,

\[
\text{Dividends} = \text{Corporate Profit} - \text{Retained Earnings} - \text{Corporate Income Tax}
\]
\[
= 160 - 90 - 55
\]
\[
= 15.
\]

c) 
NI = Compensation of employees (wages and salaries) + Net Rental Income
+ Net Interest + Corporate Profit + Proprietors’ Income (Unincorporated profit)
\[
= 1300 + 100 + 200 + 160 + 200
\]
\[
= 1960.
\]

d) Since 

\[
\text{NI} = \text{NNP} - \text{Indirect Business Taxes} - \text{Business Transfer Payments} - \text{Statistical discrepancy} + \text{Subsidies less current surplus of government enterprises},
\]

NNP = NI + Indirect Business Taxes + Business Transfer Payments
+ Statistical discrepancy
- Subsidies less current surplus of government enterprises
\[
= 1960 + 60 + 0 + 0 - 0
\]
\[
= 2020.
\]

e) 
Net Factor Income from the Rest of the World =
Receipts of factor income from the rest of the world
- Payments of factor income to the rest of the world
\[
= 17 - 20
\]
\[
= -3.
\]

f) Since GNP = GDP + Net factor income from the rest of the world,

\[
\text{GDP} = \text{GNP} - \text{Net factor income from the rest of the world}
\]
\[
= \text{NNP} + \text{Depreciation} - \text{Net factor income from the rest of the world}
\]
\[
= 2020 + 27 - (-3)
\]
\[
= 2050.
\]
\( g \) \\
\[ I_N = I_g - \text{Capital Consumption Allowance (depreciation)} \]
\[ = 410 - 27 \]
\[ = 383. \]

\( h \) \\
Since \( GDP = C + I_g + G + NX \),
\[ C = GDP - I_g - G - NX \]
\[ = 2050 - 410 - 480 - (-15) \]
\[ = 1175. \]

\( i \) \\
Since
\[ C = \text{Durables} + \text{Nondurables} + \text{Services}, \]
\[ \text{Nondurables} = C - \text{Durables} - \text{Services} \]
\[ = 1175 - 390 - 370 \]
\[ = 415. \]

\( j \) \\
\[ YD = C + S + \text{Interest paid by consumers} + \text{Personal transfer payments to foreigners} \]
\[ = 1175 + 150 + 0 + 0 \]
\[ = 1325. \]

\( k \) Since \( YD = PI - \text{Personal Taxes} \),
\[ PI = YD + \text{Personal Taxes} \]
\[ = 1325 + 150 \]
\[ = 1475. \]

\( l \) Since \( I_g = \text{New Plant & Equipment} + \text{New Residential Construction} + \text{Change in Inventories}, \)
\[ \text{Change in Inventories} = I_g - \text{New Plant & Equipment} - \text{New Residential Construction} \]
\[ = 410 - 205 - 200 \]
\[ = 5. \]

\( m \) \\
\[ \text{Savings Rate} = \frac{S}{YD} \]
\[ = \frac{150}{1325} \]
\[ = .132075; \]
that is, an 13.21 percent savings rate.

\( n \) \\
\[ \text{Final Sales} = \text{GDP} - \text{Change in Inventories} \]
\[ = 2050 - (5) \]
\[ = 2045. \]