

Assignment1 - Answer Key

1. The correlation coefficient is: -0.20 (using $1 + i = (1 + \pi)(1 + r)$) or -0.25 (using $i \approx r + \pi$). Higher real interest rates declines the expenditure on durable goods.

2. a)

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

$$C = 8 + 4 + 4 = 16$$

$$I = 1 \text{ (Inventory investment)}$$

$$G = 2$$

$$NX = 1 - 4 = -3 \text{ (Nuclear power - donuts)}$$

$$GDP = 16 + 1 + 2 - 3 = 16$$

b) $NFP = 1 - 2 = -1$, so $GNP = GDP + NFP = 15$
(NFP = clown services minus nuclear waste cleaning services)

c) $CA = NX + NFP = -3 - 1 = -4$.

d) $S_p = Y + NFP - C - T = 16 - 1 - 16 - 0 = -1$

e) $S_g = T - G = 0 - 2 = -2$, Note: $S = I + CA = 1 - 4 = -3 = S_p + S_g$.

3. a) $\frac{100-94}{94} = 0.0638$.

b) $84(1 + 0.0638)(1 + i) = 100$ and $i = 0.119$.

c) $84\$(1.0638) = 89.36\$$.

d) $0.119 - (0.0638 - 0.02) = 0.0753$.

4. a) $N = 50$, $w = 20$. b) $w = 19.31$, $N = 48.62$, $T = 100\$$. c) $w = 21.371$, $N = 48.63$, $T = 100\$$. d) Both solutions yield the same revenues for the government and the same after-tax wage for the workers .

5. $1985 = 40\,038\$$, $1990 = 41\,038\$$, $2000 = 47\,403\$$.