1. (1) $y = C + i + g \Rightarrow y = 100 + 0.8(y + 200) + 400$

$\Rightarrow y = 100 + 0.8y + 160 + 400 \Rightarrow y = 1000$ (美元)

(2) $80 = 4$

$k_g = \frac{1}{1-\beta} = 5 \quad k_t = -\frac{\beta}{1-\beta} = -\frac{0.8}{0.2} = -4 \quad k_i = \frac{1}{1-\beta} = 5 \quad k_{tr} = \frac{\beta}{1-\beta} = 4$

$k_b = k_g + k_t = 1$

(3) 均衡状态时：$\Delta y = 1200 - 1000 = 200$ (美元)

(1) $\Delta g = \frac{\Delta y}{k_g} = \frac{200}{5} = 40$ (2) $\Delta T = \frac{\Delta y}{k_t} = \frac{200}{-4} = -50$

(3) $\Delta g = \Delta T = \frac{\Delta y}{k_b} = 200$

2. $S = -1000 + 0.25\, y_d \quad i_1 = 400 \quad i_2 = 600$

(1) $\because S = i$

$\therefore S_1 = i_1 = 400 \quad S_2 = i_2 = 600$

$0.25 y_{d1} - 1000 = S_1 \Rightarrow y_{d1} = 8000 \quad 0.25 y_{d2} - 1000 = 600 \Rightarrow y_{d2} = 9600$

$\Delta y_d = y_{d2} - y_{d1} = 1600$

3. (1) $y = C + i + g = 1000 + 0.75(y - 800) + 800 + 750 \Rightarrow y = 8400$

$y_d = y - t = 8400 - 800 = 7600$

(2) $C = 1000 + 0.75 \times 7600 = 6700$

(3) $S = y_d - C = 7600 - 6700 = 900$

$S_g = t - g = 800 - 750 = 50$

(4) $y = \frac{\alpha - \beta t + i + g}{1 - \beta} \Rightarrow k_i = \frac{1}{1-\beta} = \frac{1}{0.25} = 4$

5. $t = 600$　　$\beta = 1-0.2 = 0.8$

$y = c + i + g = \alpha + \beta(y - t + tr) + i + g \Rightarrow y = \dfrac{\alpha - \beta t + \beta tr + i + g}{1-\beta}$

$k_g = \frac{1}{1-\beta} = 5$　$k_{tr} = 4$　$k_t = -4$　$\Delta y = k_g \Delta g + k_{tr} \Delta tr + k_t \Delta t = -1500$

∴新的国民收入减少1500元

附加题

(1) $y = c + i + g + nx = 30 + 0.8(y - t_n) + i + g + nx$

$\Rightarrow y = 30 + 0.8(y - 50) + 60 + 50 + 50 - 0.05y \Rightarrow y = 600$

(2) $nx = 50 - 0.05y = 50 - 0.05 \times 600 = 20$

(3) $\beta = 0.8$　$k_i = \frac{1}{1-\beta} = 5$

(4) $\Delta y = k_i \Delta i = 5 \times 10 = 50$　　$y_2 = y + \Delta y = 650$

$nx = 50 - 0.05 y_2 = 50 - 0.05 \times 650 = 17.5$

(5) $y = 30 + 0.8(y - 50) + 60 + 50 + 40 - 0.05y \Rightarrow y = 560$

$nx = 40 - 0.05y = 40 - 0.05 \times 560 = 12$