

2.2

The given information is as follows;

$$C = 300 + 0.8(Y - T)$$

$$T = 150$$

$$G = 250$$

$$\text{Investment spending}(I) = 200$$

Substitute the above values in $Y = C + I + G$ to calculate the output level(Y) as follows:

$$Y = C + I + G$$

$$Y = 300 + 0.8(Y - 150) + 200 + 250$$

$$Y(1 - 0.8) = 630$$

$$\boxed{Y_e = 3150}$$

Substitute $Y_e = 3150$ in C as follows:

$$C = 300 + 0.8(Y - T)$$

$$= 300 + 0.8(3150 - 150)$$

$$\boxed{C_e = 2700}$$

Savings(S) is calculated as follows:

$$S = Y - C - T$$

$$= 3150 - 2700 - 150$$

$$\boxed{S_e = 300}$$

Equilibrium level of GDP using tax multiplier:

The tax collected is reduced to 120 from 150 by 30 units. The marginal propensity to consume(mpc) is given as 0.8(from C). The tax multiplier(m) is calculated as follows:

$$\begin{aligned} m &= \frac{mpc}{1 - mpc} \\ &= \frac{0.8}{1 - 0.8} \\ &= 4 \end{aligned}$$

1A.1

Equilibrium income $Y = 496.875$

Net taxes = 74.375

Government budget surplus = 29.375