

EE212 Principles of Macroeconomics, 2/2017 (Sec. 046402-Sicha)

Problem Sets 4 :

Chapter 3. National Income Equilibrium (1)

Please submit at the BE office, 5th floor department of Economics building.

Deadline of submission : February 22, 2018, before 15.00 hrs. Late submission will not be accepted.

1. Consider the economy with

$$\begin{aligned}
C &= 100 + 0.8Y_d, \\
T &= 50, \\
R &= 30.
\end{aligned}$$

(a) Find the break-even level of disposable income and interpret its meaning.

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(b) Write down the saving function as a function of  $Y_d$ .

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(c) Write down the consumption function as a function of  $Y$ .

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(d) Write down the saving function as a function of  $Y$ .

.....

.....

2. Consider the economy with

$$\begin{aligned}
C &= 1600 + 0.8Y, \\
T &= 600, \\
R &= 100.
\end{aligned}$$

(a) Write down consumption function as a function of disposable income ( $Y_d$ ).

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(b) Find the break-even level of disposable income and interpret its meaning. Show your steps.

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(c) Plot consumption ( $C$ ) against disposable income ( $Y_d$ ). Indicate the intercept and the break-even level of disposable income.



- The vertical axis intercept is equal to .....
- The slope is equal to .....

(d) Plot consumption ( $C$ ) against aggregate output ( $Y$ ). Indicate the intercept and write down the consumption function.



- The vertical axis intercept is equal to .....
- The slope is equal to MPC, which is equal to.....

(e) From (c), suppose Tax decreases from 600 to 200. Write down the new consumption function as a function of aggregate output ( $Y$ ). Plot it on the graph in (d). Indicate clearly the original consumption line and the new consumption line.

The new consumption function is .....

3. Consider the economy with

$$\begin{aligned} S &= -2900 + 0.25Y_d, \\ T &= 900, \\ R &= 500. \end{aligned}$$

(a) Find the break-even level of disposable income. [No need to interpret its meaning.]

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 .....

(b) Write down the consumption function as a function of  $Y_d$ .

.....  
 .....

(c) Write down the saving function as a function of  $Y$ .

.....  
 .....

(d) Plot Saving against disposable income ( $Y_d$ ). Indicate the intercept and the break-even level of disposable income.



- The vertical axis intercept is equal to .....
- The slope is equal to MPS, which is equal to.....

(e) Plot Saving against aggregate output ( $Y$ ). Indicate the intercept. Write down the saving function.



- The vertical axis intercept is equal to .....
- The slope is equal to MPS, which is equal to.....

(f) From (c), suppose Tax decreases from 900 to 600. Write down the new saving function as a function of aggregate output ( $Y$ ). Plot it on the graph in (e). Indicate clearly the original saving line and the new saving line.

The new saving function is .....