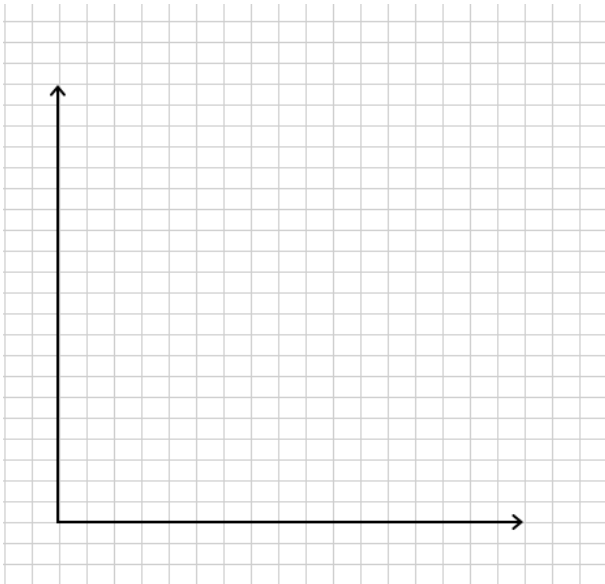


PART I. Answer all the following questions.

1. [15 marks] Write down the consumer's life time budget constraint (5 marks). Interpret its meaning (10 marks).

2. [5 marks] Suppose $y = 100, t = 20, y' = 130$ and $t' = 10$. Let $r = 0.2$. Write down consumer's life time budget constraint.

3. [30 marks] Suppose $y = 100, t = 20, y' = 130$ and $t' = 10$. Let $r = 0.2$. (18 marks) Please draw the consumer's budget line and show all important points on the graph [vertical intercept, horizontal axis intercept and endowment point]. Please also write down the name of both axes.



- (4 marks) What is the value of the slope of the graph?

- (4 marks) How many units of future consumption must be exchanged for one unit of current consumption?

- (4 marks) How many units of current consumption must be exchanged for one unit of future consumption?

4. [20 marks] Use the information in question 3. Suppose the consumer A, choose to consume 90 units of current consumption goods
 - 4.1 (4 marks) How many units the consumer A can consume in the future period?
 - 4.2 (4 marks) The consumer A is a lender or a borrower?
 - 4.3 (4 marks) How many units the consumer A lend/borrow?
 - 4.4 (8 marks) Show the consumer A's choice on the graph, and indicate the amount of the consumer A saving/dissaving on the graph in question 3.
5. [5 marks] Suppose $y = 130, t = 20, y' = 130$ and $t' = 10$. Let $r = 0.2$. Please calculate the consumer's present value of lifetime income.

6. [5 marks] From 5. Please calculate the consumer's future value of lifetime income.

PART II. [20 marks] Let the vertical axis is future consumption (C') and the horizontal axis is current consumption (C). Determine whether the following statement is True (T) , False (F).

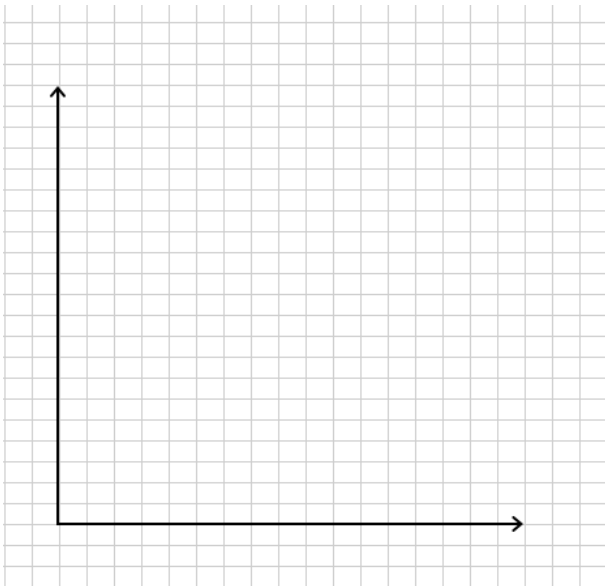
- 1. When a consumer chooses a point which is below the endowment point, the consumer is a lender.
- 2. When the interest rate (r) increases, the budget line becomes steeper.
-3. When a consumer's current disposable income ($y - t$) increases the budget line shifts to the right.
-4. When a consumer's future disposable income ($y' - t'$) increases the budget line shifts becomes steeper.
-5. When a consumer chooses the endowment point, the consumer is not a borrower or a lender.

PART I. Answer all the following questions.

1. [15 marks] Write down the consumer's life time budget constraint (5 marks). Interpret its meaning (10 marks).

2. [5 marks] Suppose $y = 110, t = 20, y' = 120$ and $t' = 10$. Let $r = 0.1$. Write down consumer's life time budget constraint.

3. [30 marks] Suppose $y = 110, t = 20, y' = 120$ and $t' = 10$. Let $r = 0.1$. (18 marks) Please draw the consumer's budget line and show all important points on the graph [vertical intercept, horizontal axis intercept and endowment point]. Please also write down the name of both axes.



- (4 marks) What is the value of the slope of the graph?

- (4 marks) How many units of future consumption must be exchanged for one unit of current consumption?

- (4 marks) How many units of current consumption must be exchanged for one unit of future consumption?

4. [20 marks] Use the information in question 3. Suppose the consumer A, choose to consume 120 units of current consumption goods
 - 4.1 (4 marks) How many units the consumer A can consume in the future period?
 - 4.2 (4 marks) The consumer A is a lender or a borrower?
 - 4.3 (4 marks) How many units the consumer A lend/borrow?
 - 4.4 (8 marks) Show the consumer A's choice on the graph, and indicate the amount of the consumer A saving/dissaving on the graph in question 3.
5. [5 marks] Suppose $y = 150, t = 20, y' = 120$ and $t' = 10$. Let $r = 0.1$. Please calculate the consumer's present value of lifetime income.

6. [5 marks] From 5. Please calculate the consumer's future value of lifetime income.

PART II. [20 marks] Let the vertical axis is future consumption (C') and the horizontal axis is current consumption (C). Determine whether the following statement is True (T) , False (F).

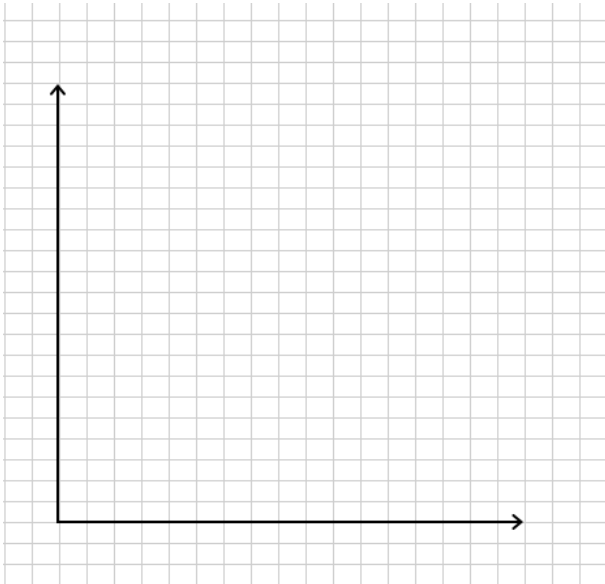
- 1. When a consumer chooses a point which is above the endowment point, the consumer is a lender.
- 2. When a consumer chooses the endowment point, the consumer is not a borrower or a lender.
-3. When a consumer's current disposable income ($y - t$) increases the budget line shifts to the right.
-4. When a consumer's future disposable income ($y' - t'$) increases the budget line becomes flatter.
-5. When the interest rate (r) increases, the budget line becomes flatter.

PART I. Answer all the following questions.

1. [15 marks] Write down the consumer's life time budget constraint (5 marks). Interpret its meaning (10 marks).

2. [5 marks] Suppose $y = 220, t = 20, y' = 250$ and $t' = 10$. Let $r = 0.2$. Write down consumer's life time budget constraint.

3. [30 marks] Suppose $y = 220, t = 20, y' = 250$ and $t' = 10$. Let $r = 0.2$. (18 marks) Please draw the consumer's budget line and show all important points on the graph [vertical intercept, horizontal axis intercept and endowment point]. Please also write down the name of both axes.



- (4 marks) What is the value of the slope of the graph?

- (4 marks) How many units of future consumption must be exchanged for one unit of current consumption?

- (4 marks) How many units of current consumption must be exchanged for one unit of future consumption?

4. [20 marks] Use the information in question 3. Suppose the consumer A, choose to consume 200 units of current consumption goods
 - 4.1 (4 marks) How many units the consumer A can consume in the future period?
 - 4.2 (4 marks) The consumer A is a lender or a borrower?
 - 4.3 (4 marks) How many units the consumer A lend/borrow?
 - 4.4 (8 marks) Show the consumer A's choice on the graph, and indicate the amount of the consumer A saving/dissaving on the graph in question 3.
5. [5 marks] Suppose $y = 230, t = 20, y' = 250$ and $t' = 10$. Let $r = 0.2$. Please calculate the consumer's present value of lifetime income.

6. [5 marks] From 5. Please calculate the consumer's future value of lifetime income.

PART II. [20 marks] Let the vertical axis is future consumption (C') and the horizontal axis is current consumption (C). Determine whether the following statement is True (T) , False (F).

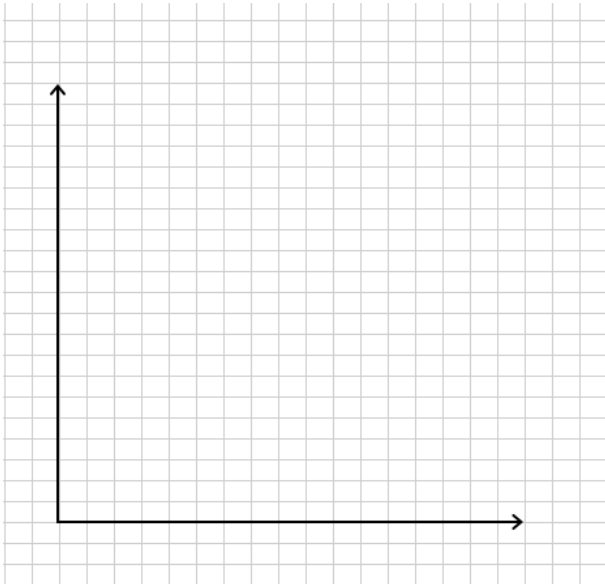
- 1. When a consumer chooses the endowment point, the consumer is not a borrower or a lender.
- 2. When a consumer chooses a point which is below the endowment point, the consumer is a borrower.
-3. When a consumer's current disposable income ($y - t$) increases the budget line shifts becomes steeper.
-4. When a consumer's future disposable income ($y' - t'$) increases the budget line shifts upwards.
-5. When the interest rate (r) increases, the budget line becomes steeper.

PART I. Answer all the following questions.

1. [15 marks] Write down the consumer's life time budget constraint (5 marks). Interpret its meaning (10 marks).

2. [5 marks] Suppose $y = 120, t = 20, y' = 130$ and $t' = 10$. Let $r = 0.2$. Write down consumer's life time budget constraint.

3. [30 marks] Suppose $y = 120, t = 20, y' = 130$ and $t' = 10$. Let $r = 0.2$. (18 marks) Please draw the consumer's budget line and show all important points on the graph [vertical intercept, horizontal axis intercept and endowment point]. Please also write down the name of both axes.



- (4 marks) What is the value of the slope of the graph?

- (4 marks) How many units of future consumption must be exchanged for one unit of current consumption?

- (4 marks) How many units of current consumption must be exchanged for one unit of future consumption?

4. [20 marks] Use the information in question 3. Suppose the consumer A, choose to consume 120 units of current consumption goods
 - 4.1 (4 marks) How many units the consumer A can consume in the future period?
 - 4.2 (4 marks) The consumer A is a lender or a borrower?
 - 4.3 (4 marks) How many units the consumer A lend/borrow?
 - 4.4 (8 marks) Show the consumer A's choice on the graph, and indicate the amount of the consumer A saving/dissaving on the graph in question 3.
5. [5 marks] Suppose $y = 150, t = 20, y' = 120$ and $t' = 10$. Let $r = 0.2$. Please calculate the consumer's present value of lifetime income.

6. [5 marks] From 5. Please calculate the consumer's future value of lifetime income.

PART II. [20 marks] Let the vertical axis is future consumption (C') and the horizontal axis is current consumption (C). Determine whether the following statement is True (T) , False (F).

- 1. When a consumer chooses a point which is above the endowment point, the consumer is a lender.
- 2. When a consumer chooses the endowment point, the consumer is not a borrower or a lender.
-3. When the interest rate (r) increases, the budget line becomes steeper.
-4. When a consumer's future disposable income ($y' - t'$) increases the budget line shifts upwards.
-5. When a consumer's current disposable income ($y - t$) increases the budget line shifts to the right.