

#1

12. Five consumers have the following marginal utility of apples and pears:

	Marginal Utility of Apples	Marginal Utility of Pears
Claire	6	12
Phil	6	6
Haley	6	3
Alex	3	6
Luke	3	12

The price of an apple is \$1, and the price of a pear is \$2. Which, if any, of these consumers are optimizing their choices of fruit? For those who are not, how should they change their spending?

Claire

$$\text{Apples : } 6/1 = 6$$

$$\text{Pears : } 12/2 = 6$$

Haley

$$\text{Apples : } 6/1 = 6$$

$$\text{Pears : } 3/2 = 1.5$$

Luke

$$\text{Apples : } 3/1 = 3$$

$$\text{Pears : } 12/2 = 6$$

Phil

$$\text{Apples : } 6/1 = 6$$

$$\text{Pears : } 6/2 = 3$$

Alex

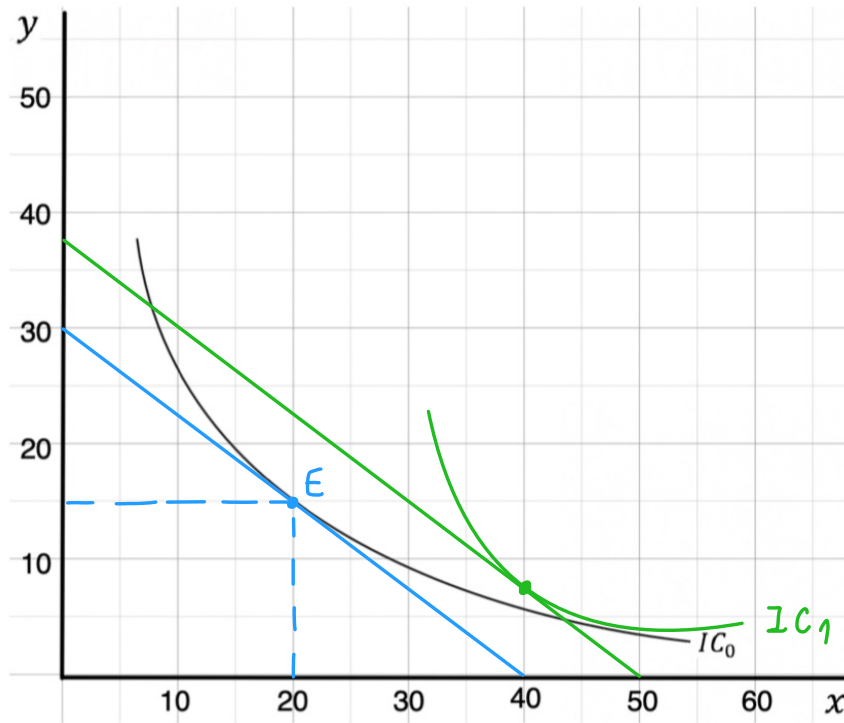
$$\text{Apples : } 3/1 = 3$$

$$\text{Pears : } 6/2 = 3$$

The consumers that have the marginal utility is equal are Alex & Claire choices which are optimal.

- Phil should consume more apples & reduce the consumption of pears
- Haley should consume more apples & reduce the consumption of pears.
- Luke should consume less apples & more of pears.

#2 Given the price of $x = 3$, price of $y = 4$, and budget = 120.



$$y = \frac{120}{4} = 30$$

$$x = \frac{120}{3} = 40$$

- A) Draw the budget line and find the equilibrium with the given indifference curve IC in the diagram below.
 B) If the income increases from 120 to 150, where will be the new equilibrium so that the change in the consumption of x be such that the Income Elasticity of x is equal to 1.
 C) With the change of equilibrium you found in (B), what will be the Income Elasticity of y ?

A) at Point E (20, 15)

$$B) \frac{150}{3} = 50 \quad \frac{150}{4} = 37.5$$

At point F (40, 7.5)

As the change in increasing income will be affected the product x & also the elasticity of x is equal to 1.

This means when there is a rise in income, consumption of the good will rise.

$\therefore$ Therefore, the consumption of x will increase & consumption of y will be dropped.

c) the elasticity of y will go down & the demand of the product y becomes less $\eta_y < 0$ inferior.