

Pimyada Kunanon
6204641092

Apples = y
Pears = x

$P_y = 1 \$$
 $P_x = 2 \$$

#1

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

		Marginal Utility of Apples	Marginal Utility of Pears	$-\frac{MU_x}{MU_y}$
OK →	Claire [maximum]	6	12	-2
consume pears →	Phil [less optimum]	6	6	-1
consume pears →	Haley [less optimum]	6	3	-0.5
OK →	Alex [maximum]	3	6	-2
consume apples →	Luke [over maximum]	3	12	-4

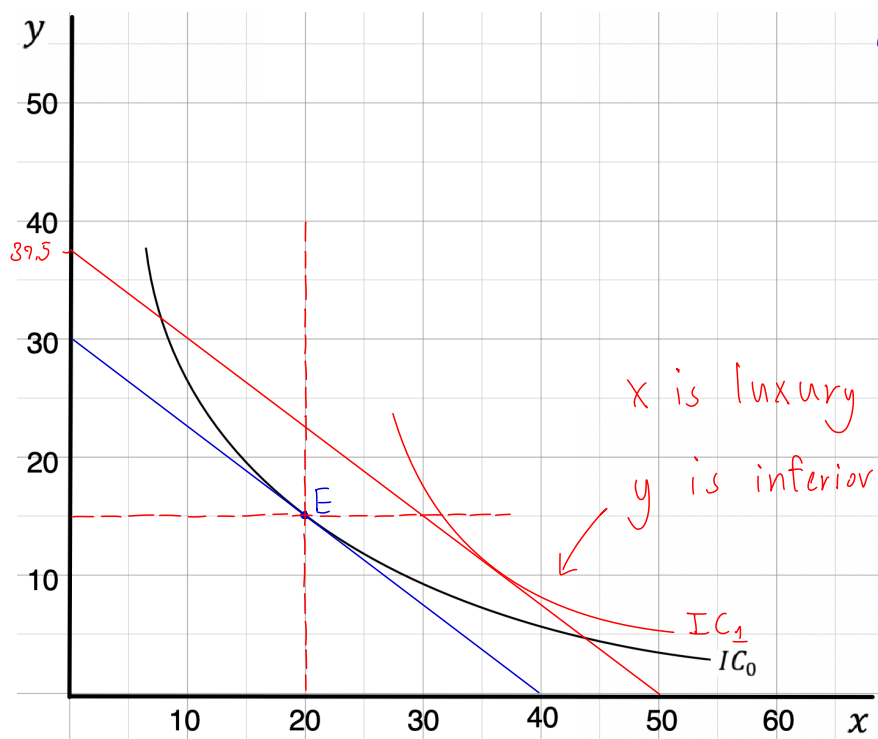
The price of an apple is \$1, and the price of a pear is \$2. Which, if any, of these consumers are optimizing their choices of fruit? For those who are not, how should they change their spending?

↳ Claire and Alex ↳ Phil, Haley, Luke

exchange rate in the market
 $= -\frac{P_x}{P_y} = -\frac{2}{1} = -2$

exchange rate in the eyes of consumer
 $= -\frac{MU_x}{MU_y}$

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



$$(A) 3x + 4y = 120$$

$$\frac{B}{P_y} = \frac{120}{4} = 30$$

$$\frac{B}{P_x} = \frac{120}{3} = 40$$

∴ the equilibrium is at point (20, 15)

$$(b) 3x + 4x = 150$$

$$\frac{B'}{P_y} = \frac{150}{4} = 37.5$$

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?

$$\frac{B'}{P_x} = \frac{150}{3} = 50$$

$$\% \Delta I = \frac{150 - 120}{120} = 25\%$$

$$n_I^x = 1 = \frac{\% \Delta X}{\% \Delta I}$$

Used to consume

$$X_0 = 20, y_0 = 15$$

$$1 = \frac{\% \Delta X}{25\%}$$

$$X_1 = 25, y_1 = 11.25$$

$$25\% = \% \Delta X$$

$$0.25 = \frac{X_1 - X_0}{X_0}$$

$$(X \text{ is luxury}) \Delta X = X_1 - X_0 = 5$$

$$(y \text{ is inferior}) \Delta y = y_1 - y_0 = -3.75$$

$$0.25 = \frac{X_1 - 20}{20}$$

$$X_1 = 25$$

$$(c) n_I^y = \frac{\% \Delta Y}{\% \Delta I} = \frac{-25\%}{25\%} = -1$$