#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?

Slope : $-\frac{\partial / P_y}{\partial / P_x} = -\frac{3}{4}$

$3x + 4y = 120$

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

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

$3x + 4y = 150$

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

Slope : $-\frac{37.5}{50} = -\frac{3}{4}$

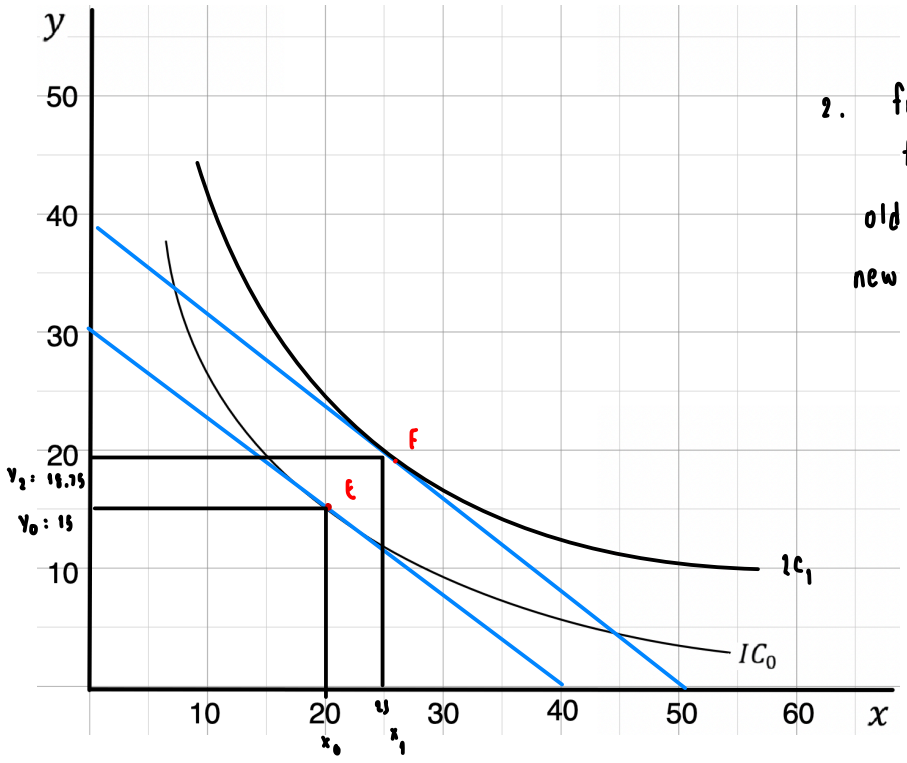
1) Claire optimized her choice best because of marginal utility compared to the others

Phil, Haley should've spend all his money for apples

Alex should've spend whatever, the result will be fitted anyway

Luke should have spend all for pears

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



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?

2. from $3x + 4y = 120$

to $3x + 4y = 150$

old : $(x_0, y_0) = (20, 15)$

new : $(x_1, y_1) = (25, 18.75)$

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

$\% \Delta x = \frac{25 - 20}{25} = 25\%$

$\% \Delta y = \frac{18.75 - 15}{18.75} = 25\%$

b) $n^x_I = \frac{\% \Delta x}{\% \Delta I} = 1 > 0$

when I increases, x will be consumed more

c) $n^y_I = \frac{\% \Delta y}{\% \Delta I} = \frac{25}{25} = 1 > 0$

when I increases, y will be consumed more