

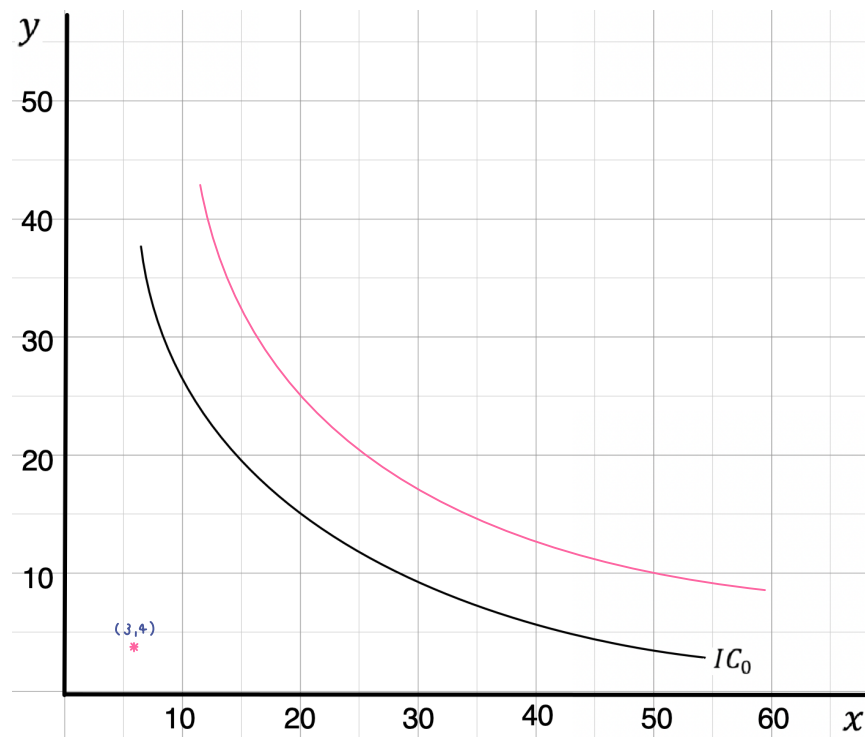
#1

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?

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



- Draw the budget line and find the equilibrium with the given indifference curve IC in the diagram below.
- 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.
- With the change of equilibrium you found in (B), what will be the Income Elasticity of y ?

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$$\frac{\text{marginal utility of apple}}{\text{marginal utility of pear}} = \frac{\text{price of apple}}{\text{price of pear}} \quad p = \frac{1}{2}$$

Claire : $\frac{6}{12} = \frac{1}{2}$ $\therefore$ Therefore, Claire is optimizing her choice of fruits

Phil : $\frac{6}{6} > \frac{1}{2}$ $\therefore$ Therefore, Phil is not at the optimum point
He should increase spending on pear

Haley : $\frac{6}{3} > \frac{1}{2}$ $\therefore$ Therefore, Haley is not at the optimum point
She should increase spending on pear

Alex : $\frac{3}{6} = \frac{1}{2}$ $\therefore$ Therefore, Alex is optimizing her choice of fruits

Luke : $\frac{3}{12} < \frac{1}{2}$ $\therefore$ Therefore, Luke is not at the optimum point
He should decrease spending on pear