Pongpob Punnara

6304641164

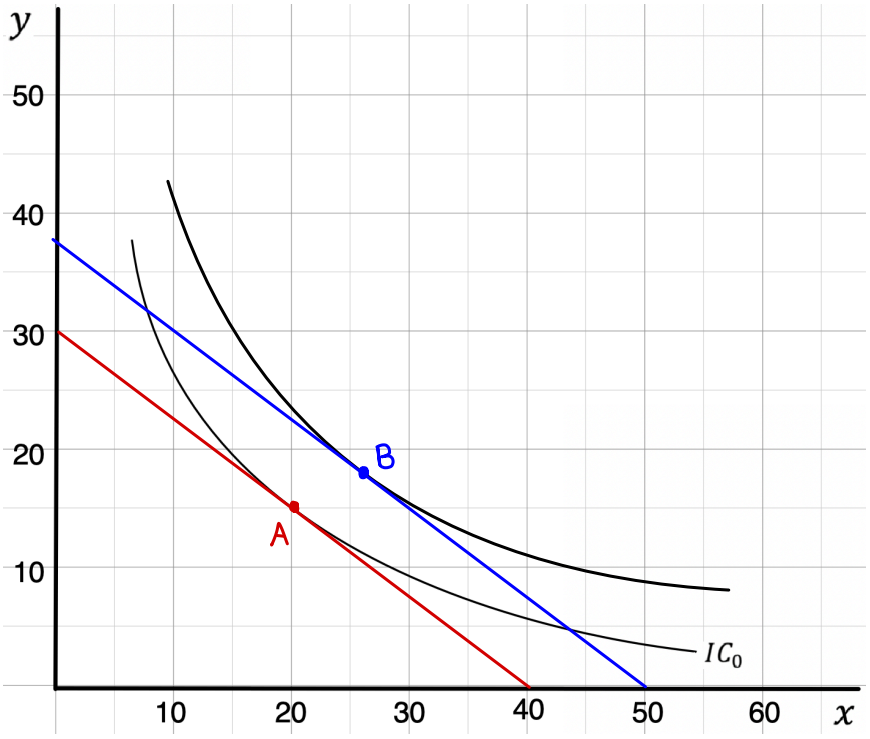
#1

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.



$3X + 4y = 120$

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

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

$\text{slope} = \frac{-30}{40} = -0.75$

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

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

$\text{Slope} = \frac{-37.5}{50} = -0.75$

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?

① From the given table, to know who optimizes their choices of fruit, we need to consider on MU/dollars for apples and MU/dollars for pears.

MU/$ for apples	MU/$ for pears
6/1 = 6	12/2 = 6
6/1 = 6	6/2 = 3
6/1 = 6	3/2 = 1.5
3/1 = 3	6/2 = 3
3/1 = 3	12/2 = 6

Sum of MU → Clair > Phil = Luke > Haley > Alex

Best optinization

For change of the others : Phil → Spend all on apples.

Luke → Spend all on pears.

Haley → Spend all on apples.

Alex → Spend all on either

is the same result for even numbers $

but should spend all on apples for odd numbers $

- For even $ → 4 $

All apples → MU = 3x4 = 12 } same

All pears → MU = 6x2 = 12 }

- For odd $ → 5 $

All apple → MU = 3x5 = 15 } 15 > 12

All pears → MU = 6x2 = 12 }

(2)

(B) New equation → $3x+4y=150$

Old equilibrium point (20,15)

New equilibrium point (25,18.75) → $3(25)+4y=150$, $y=18.75$

From the given information, $\eta_I^x = 1$

$$\frac{\% \Delta x}{\% \Delta I} = \frac{\frac{? - 20}{20}}{\frac{150-120}{120}} = 1 = 25$$

(C) $$\eta_I^y = \frac{\% \Delta Y}{\% \Delta I} = \frac{18.75-15}{15} \Big/ \frac{150-120}{120}$$

$$= \frac{3.75}{15} \Big/ \frac{1}{4} = 1 \#$$

$\therefore \eta_I^y = 1 \#$

Pongpob Punnara

6304641167