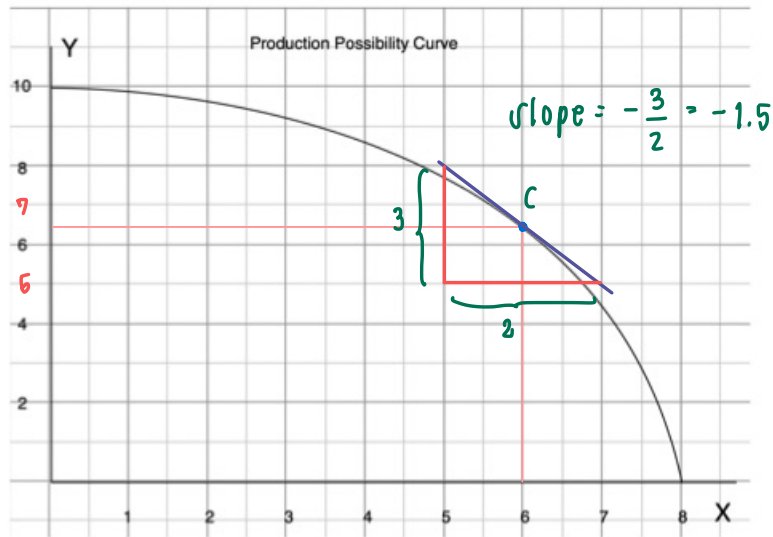


HW Nonlinear PPC

Sorrawut J.

* 6304641472



- a) Find the opportunity cost of each additional unit of y in terms of units of x

y	x	Opp. Cost of y
0	8	
1	7.9	= 0.1 less of x
2	7.7	= 0.2
3	7.4	= 0.3
4	7.1	= 0.3
5	6.7	= 0.4
6	6.3	= 0.4
7	5.6	= 0.7
8	4.7	= 0.9
9	3.4	= 1.3
10	0	= 3.4 less of x

when y increases 1 unit at a time

- b) Is the opportunity cost of y increasing? Yes
- c) Compute the opportunity cost per unit of y when $x = 6$. at C
- d) At $x = 6$, approximate how much more x can be produced if we have y less by 0.2 units.

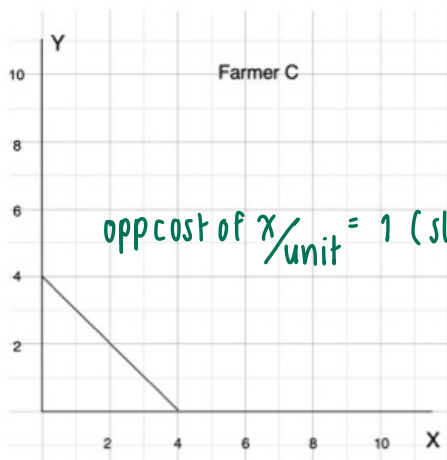
$$\textcircled{c} = \frac{1}{\text{slope}} = \frac{1}{-1.5} = -\frac{2}{3} \approx -0.67 \text{ opp cost of } y$$

$$\textcircled{d} = \Delta y = -0.2$$

$$\Delta x \approx \frac{\Delta y}{\text{slope at C}} \approx \frac{-0.2}{-1.5} \approx 0.13$$

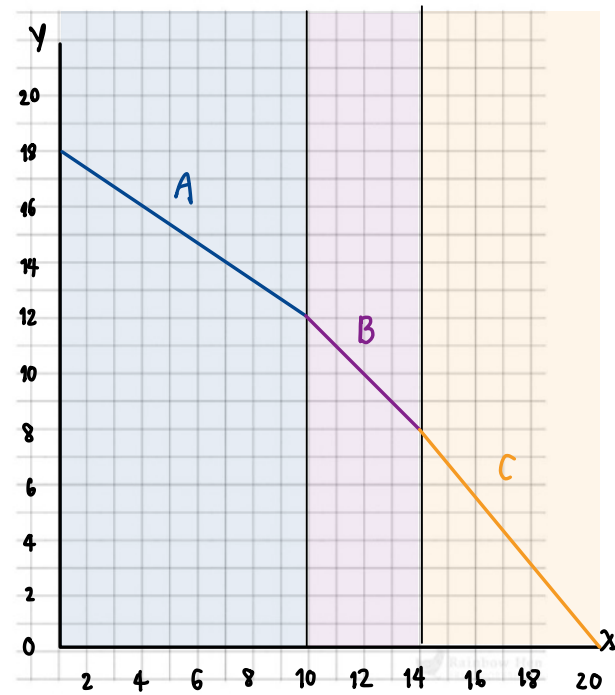
$\therefore$ approximately 0.13 unit more of x .

HW Farmer C has the PPC given below. Find the PPC of all three farmers A, B and C combined.



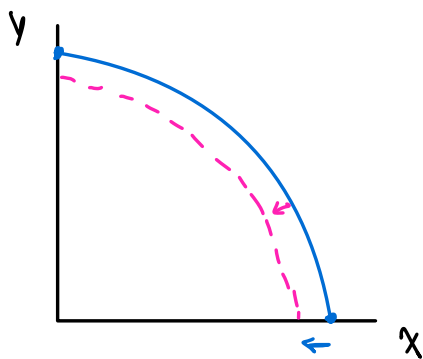
oppcost of $x/\text{unit} = 1$ (slope = -1)

X	Y
0	18
1	17.4
...	...
10	12
11	11
...	...
14	8
15	6.67
...	...
20	0.02

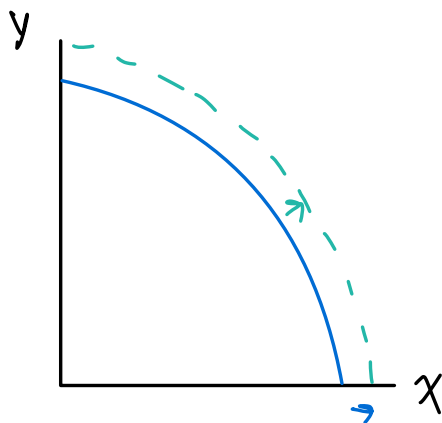


Change in PPC - fixed resources, technology, efficient.

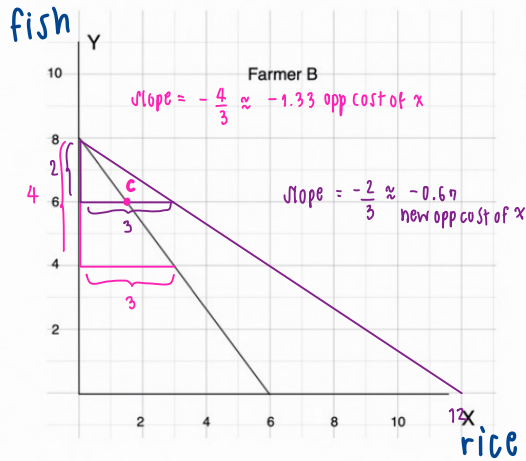
1. COVID-19



2. Improvement of Technology of producing both x and y .



HW. If a new fertilizer is found to double the output of rice (x) for any level of production of fish (y), how will PPC of farmer B change? Does the opportunity cost of x increase? Does the opportunity cost of y increase?



point C (1.5, 6)

$$\Delta X = 2$$

$$\Delta Y \approx (\text{slope at } C) \cdot \Delta X$$

$$\approx (-1.33) \cdot 2$$

$$\approx -2.66$$

$$\frac{1}{-1.33} = -0.75 \text{ opp cost of } Y$$

$$\frac{1}{-0.67} = -1.49 \text{ of new opp cost of } Y$$

$\therefore$ opp cost of $x \downarrow$
opp cost of $y \uparrow$

1 more unit of $y \rightarrow 0.67$ unit less of x

1 more unit of $x \Rightarrow 1.49$ units less of y