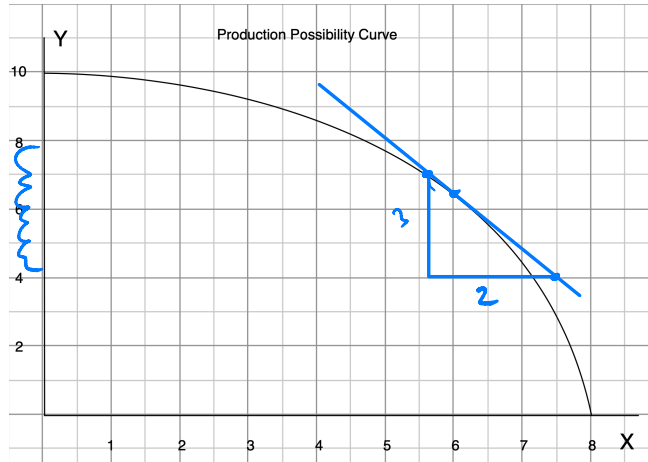


HW 2 Due Thursday, February 4, 2021
1. Nonlinear PPC



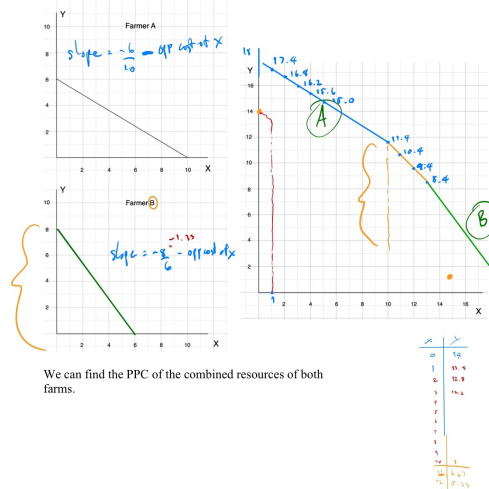
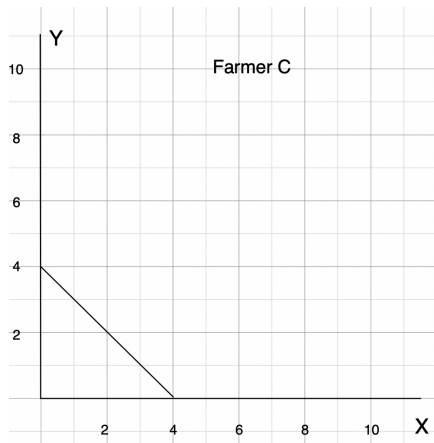
a) Find the opportunity cost of each additional unit of y in terms of units of x

y	x	Opp. Cost of y
0	8	0.1
1	7.9	0.1
2	7.6	0.3
3	7.4	0.2
4	7.2	0.2
5	6.75	0.25
6	6.25	0.5
7	5.5	0.75
8	4.75	0.75
9	3.5	1.25
10	0	2.5

when y increases 1 unit at a time
 $\rightarrow 0.67$ at point $\frac{\Delta x}{\Delta y} \cdot \Delta Y$
 d. at $x=6$
 approximately $\approx \text{slope} \cdot \Delta Y$
 $= -0.67 \cdot -0.2$
 $= 0.134$
 approximately Δx is 0.134.

- b) Is the opportunity cost of y increasing? **Yes.**
 c) Compute the opportunity cost per unit of y when $x = 6$. **when Y increase 1 unit x will decrease 0.67 unit.**
 d) At $x = 6$, approximate how much more x can be produced if we have y less by 0.2 units. **unit.**

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



We can find the PPC of the combined resources of both farms.