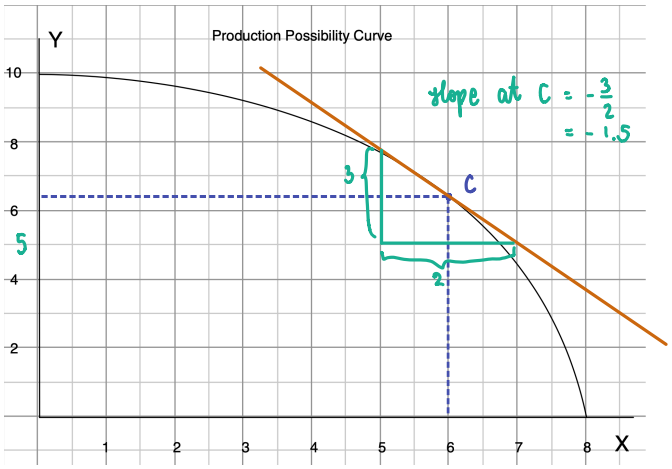
HW 2 Due Thursday, February 4, 2021
1. Nonlinear PPC



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

y	x	Opp. Cost of y when y increases 1 unit at a time
0	8	
1	7.9	= 0.1 less of x
2	7.7	= 0.2 less of x
3	7.4	= 0.3 less of x
4	7.2	= 0.3 less of x
5	6.7	= 0.5 less of x
6	6.3	= 0.4 less of x
7	5.6	= 0.7 less of x
8	4.7	= 0.9 less of x
9	3.4	= 1.3 less of x
10	0	= 3.4 less of x

c) At C (6, y) slope = -1.5

$\frac{1}{\text{slope}} = \frac{1}{-1.5} = -\frac{2}{3}$

$\approx$ -0.67 opp cost of y per unit

d) At C, $\Delta y = -0.2$

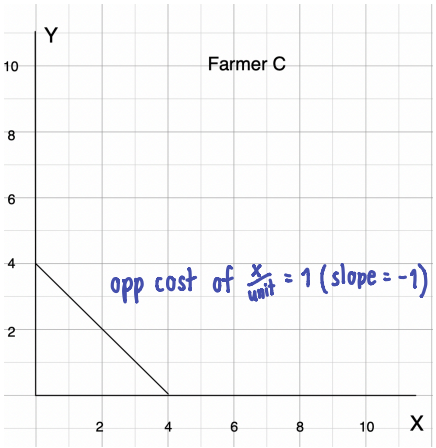
$\Delta x \approx \underbrace{(-.67)}_{\frac{1}{\text{slope at C}}}\underbrace{(-.2)}_{\Delta y} = +0.134$

b) Is the opportunity cost of y increasing? Yes, it is.

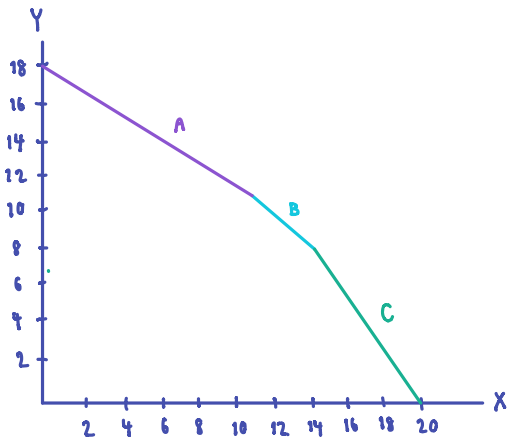
c) Compute the opportunity cost per unit of y when $x = 6$. at C

d) At $x = 6$, approximate how much more x can be produced if we have y less by 0.2 units.

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



X	Y	
0	18	A
1	17.4	
⋮	⋮	
10	12	
11	11	B
⋮	⋮	
14	8	
15	6.67	C
⋮	⋮	
20	0.02	



6304641191 Pornchanok Thawornphiboon