

**Production Possibilities Curves, Opportunity Cost, MC and MB**

**Robinson Crusoe's PPC**

Possibility	Fish	Fruit	Fish We Get	Fruit We Give Up	Cost of 1 more Fish in lbs. of Fruit given up	Opp.Cost of 1 Fruit (in fish given up)
<b>A</b> 5 hrs. Fr	0	20				
<b>B</b> 4Fr, 1Fi	3	18	A to B	3	2	0.67 fruit per fish
<b>C</b> 3Fr, 2Fi	5.5	15	B to C			
<b>D</b> 2Fr, 3Fi	7.5	11	C to D			
<b>E</b> 1Fr, 4Fi	9	6	D to E			
<b>F</b> 0Fr, 5Fi	10	0	E to F			

**A: "Law" of Increasing Opportunity Cost:**

We have increasing opportunity costs when the technology/skills/resources for producing two goods are very different. This is why the PPF's are curved. The O.C. tells us how much fruit we MUST give up in order to get one more fish. It is like the PRICE of fish in terms of berries. Or, we can calculate the O.C. of berries in terms of Fish.

**B: Productive Efficiency:**

**C: Allocative Efficiency:**

**D. Economic Growth:**

**Part E and F below are advanced material!**

**E. OK, now we know about the costs of producing more Fruit, what about the benefits???** We do a survey and ask people!! (Or ask Mr. Crusoe)

"Mr. Crusoe: Tell us about your preferences!" He tells us that:  
 If I had no fish at all, I'd be **willing to trade(give up) 10 fruits to get a fish.**  
 Once I got one fish, I'd be willing to trade 9 fruits to get a second fish.  
 If I had two fish, I'd only be willing to trade 8 fruits for a third fish.  
 If I had three fish, I'd be willing to trade 7 fruits for a fourth fish  
 If I had four fish, I'd be willing to trade 6 fruits for a fifth fish.  
 If I had five fish, I'd be willing to trade 5 fruits for a sixth fish.  
 If I had six fish, I'd be willing to trade 3 fruits for a seventh fish.  
 If I had seven fish, I'd only give up 1 fruit for an eighth fish.  
 If I had 8 fish, I just wouldn't want any more fish!

Plot this on the graph!

**F. I have already plotted the marginal cost, what he MUST give up to get these fish.**

We are plotting these costs at the average of two fish amounts. For each range of fish, average the two: For example, our first point on the X axis will be the average of 0 and 3,  $(0+3)/2=1.5$ , and between 0 and 3 the opportunity cost is .667. Our first point for Marginal Cost is 1.5, 0.667

	Between...	Fish value (Average)	Y Value (Opportunity Cost)
Point 1 <b>A - B</b>	0 to 3 fish	1.5	0.67
Point 2 <b>B - C</b>	3 to 5.5 fish	4.25	1.20
Point 3 <b>C-D</b>	5.5 to 7.5 fish	6.5	2.00
Point 4 <b>E-F</b>	7.5 to 9 fish	8.25	3.33
Point 5 <b>F-G</b>	9 to 10 fish	9.5	6.00

