

1. Bubba's accounting profit =  $\$130,000 - \$112,000 = \$18,000$

Implicit Costs not accounted for in the above:

① opportunity cost of his time =  $\$10,000$   
 ( $\$30,000 - \$20,000$  he pays himself)

② interest earnings foregone on his investment ( $\$50,000 @ 10\%$ ) =  $\$5,000$

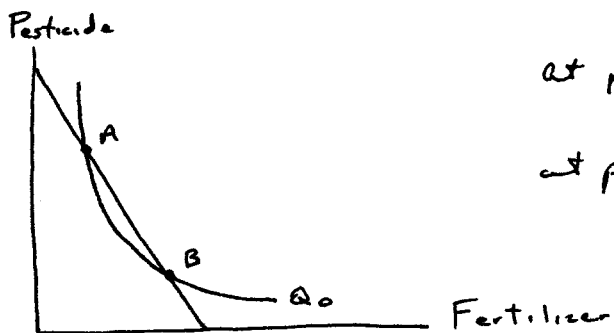
So economic profits are  $\$3,000$ , after implicit costs are subtracted.

If Bubba were to sell the bar and go to work for someone else, he would bring home  $\$35,000$  per year ( $\$30,000$  salary plus  $\$5,000$  interest earnings). That is  $\$3,000$  less than he currently is making ( $\$20,000$  salary plus  $\$18,000$  profit).

2. Cost minimization requires that  $\frac{MP_f}{MP_p} = \frac{P_f}{P_p}$

does  $\frac{10}{15} \stackrel{?}{=} \frac{7.50}{5.00} \stackrel{?}{}$

$.67 \neq 1.5$  so we are not minimizing cost. We should use relatively more pesticide and less fertilizer to minimize cost.  $\$5$  more spent on pesticide results in 15 pounds more tobacco.  $\$7.50$  more spent on fertilizer only results in 10 pounds more tobacco.

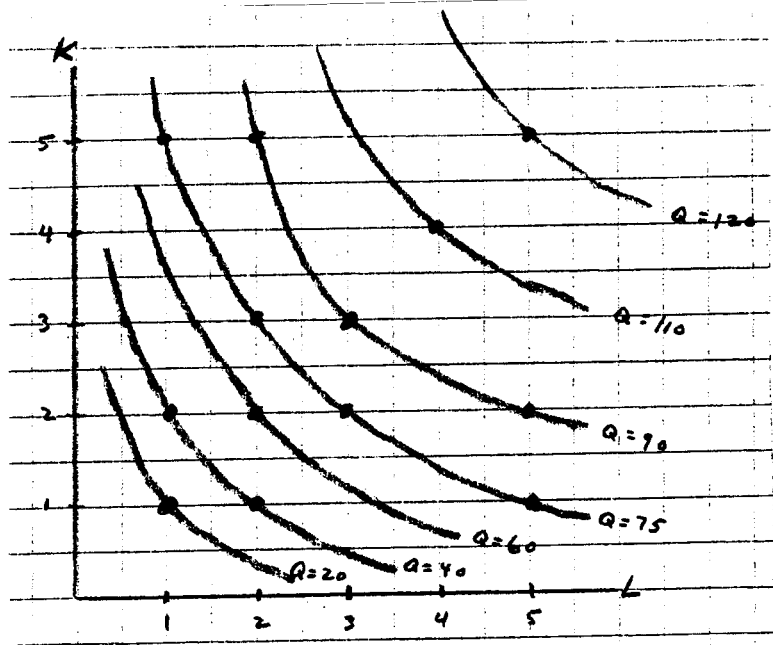


at point A:  $MRTS_{F,P} = \frac{MP_F}{MP_P} > \frac{P_F}{P_P}$

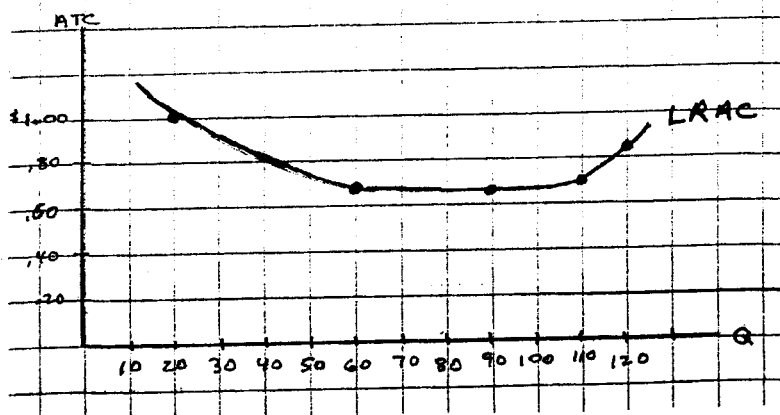
at point B:  $MRTS_{F,P} = \frac{MP_F}{MP_P} < \frac{P_F}{P_P}$

so point B!

3.



L	K	Q	TC	ATC
1	1	20	\$20	\$1.00
2	2	60	\$40	\$0.67
3	3	90	\$60	\$0.67
4	4	110	\$80	\$0.73
5	5	120	\$100	\$0.83



4.

8.12 In the left-hand figure below, the firm produces 9 units of output by moving to point F, and hiring  $L_3$  workers and using  $K_2$  units of capital. The total cost of producing at F is more than producing at C because an isocost line going through F would lie further from the origin than the isocost line tangent at C. In the right-hand figure, point F' relates to F in the left-hand figure and C' relates to C. The long-run average cost of producing 9 units is less than the short-run average cost when capital is fixed at  $K_2$  units.

