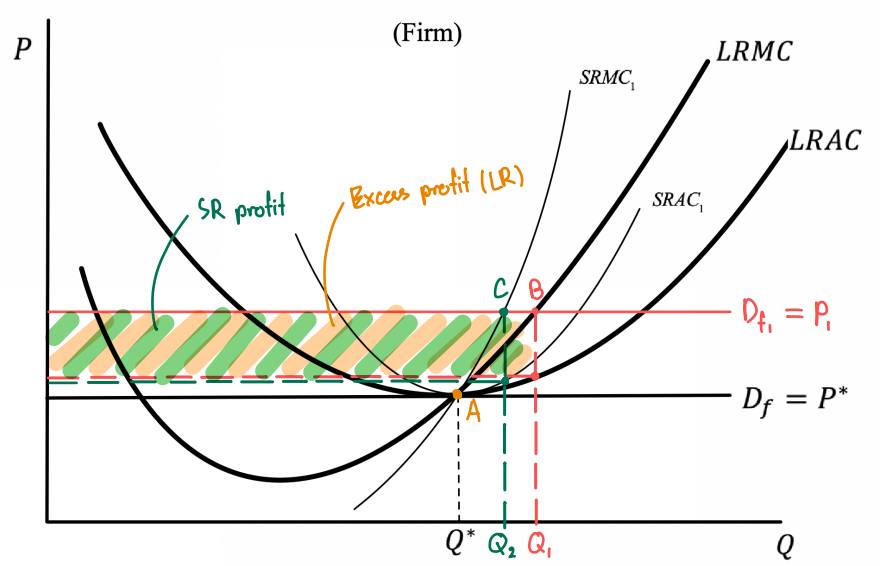
HW#13 Due May 13, 2021

Suppose that the market is in a Long-Run equilibrium where the price is at P^* and each firm produces Q^*. With the given $SRMC_1$ and $SRAC_1$ and $LRMC$ and $LRAC$, the market price increases from P^* to P_1,

a) Show how the firm will change its output in Short Run and Long Run.

b) Indicate the profit the firm receives in Short Run and Long Run.

c) Explain why the profit in Long Run is bigger than profit in Short Run.



a.) In Long run, when the price increase from P^* to P_1. Equilibrium will change from A to B which the firm will produce more from Q^* to Q_1 and satisfies the equilibrium condition.

1.) $MR(Q_1) = P_1 = LRMC(Q_1)$

2.) Slope $MR(Q_1)$ < Slope $LRMC(Q_1)$

In short run, when the price increases from P^* to P_1. Equilibrium will change from A to B which the firm will produce less from Q^* to Q_1 and satisfies the equilibrium condition.

1.) $MR(Q_2) = P_1 = SRMC(Q_2)$

2.) Slope $MR(Q_2) = 0$ < Slope $SRMC(Q_2)$

b.) Highlight in graph

C.) The profit in Long Run is bigger than profit in Short Run because cost of production in SR is more than in LR. Which in LR the firm can choose to produce at any level of L and K but in SR the firm stuck with fixed cost.