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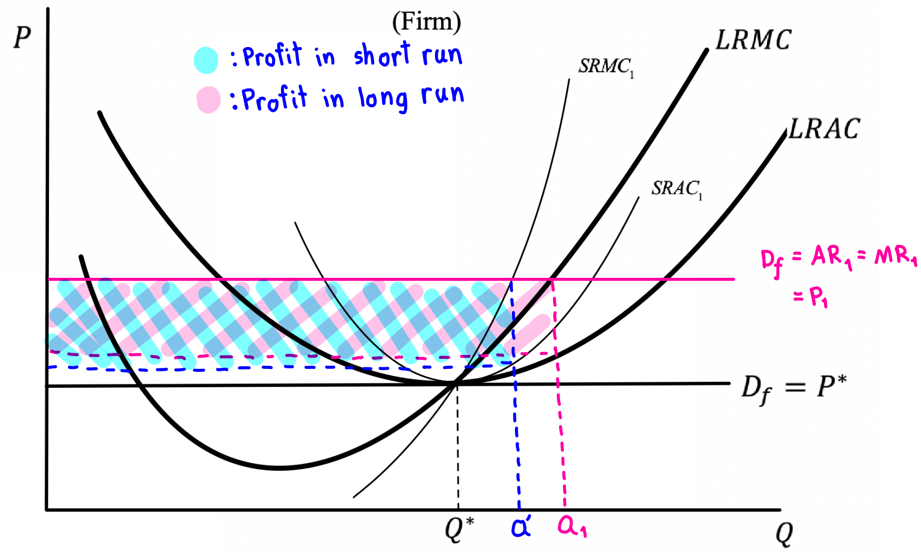
HW#13 Due May 13, 2021

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.



Short run: output increase from Q^* to Q'

Long run: output increase from Q^* to Q_1

- At Q', LR profit > SR profit since LRAC is lower than SRAC.

  But, the profit at Q' is not maximum in LR because $MR(Q') > LRMC(Q')$

- Maximum profit is at Q_1 where $MR(Q_1) = LRMC(Q_1)$ and slope MR < slope LRMC

$\therefore$ LR profit(Q_1) > LR profit(Q') > SR profit(Q')