Recitation 7 Notes
14.01SC Principles of Microeconomics

- With output fixed, whether or not cost is minimized can be seen by comparing AC and MC.
- With capital fixed, profit maximization is determined by comparison with the condition MR=MC.
- In the long-run, LRMC=SRMC at the same Q where LRAC=SRAC.
- This can be seen in the following derivation:
  d/dQ SRAC(Q) = d/dQ LRAC(Q)
  d/dQ (SRTC(Q)/Q) = d/dQ (LRTC(Q)/Q)
  (SRTC '(Q)Q – SRTC(Q))/Q^2 = (LRTC '(Q)Q – LRTC(Q))/Q^2
  SRMC (Q) – SRAC(Q) = LRMC(Q)- LRAC(Q)
- Thus when SRAC(Q)=LRAC(Q), SRMC(Q)=LRMC(Q).

- Profit π = TR-TC
- (d/dQ) π = 0 → dTR/dQ – dTC/dQ = 0

- TR = P*Q

- When perfectly competitive, MR = P
- When not perfectly competitive, MR = dP/dQ

- Short run supply (short run costs, no entry/exit)
- Profit = (P-ATC)Q
- Supply curve – chooses Q based on MC, except when price < AVC (nothing is produced)

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