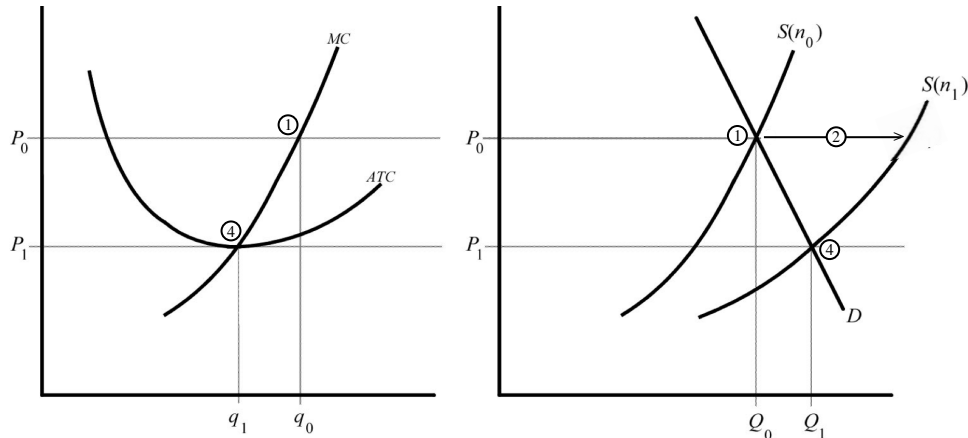


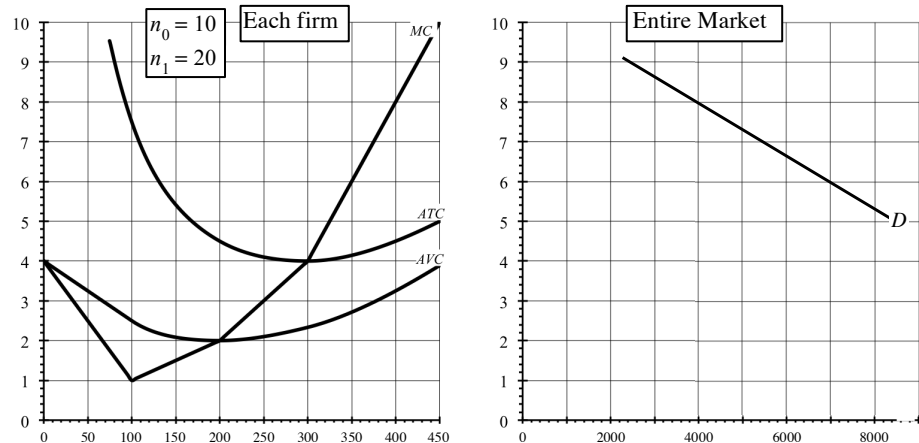
**Increase in Supply**

Supply increases with a larger number of firms since you multiply the *MC* curve by a larger *n* to get the new supply. The analysis of a change in *n* has two parts:

- ① Long run – why and how will new firms enter a market? It takes a long time for this to happen and we will look at this in the next handout.
- ② Short run – what happens in the short run right after new firms start selling in a market? It takes a long time to get new firms ready to produce but the effect on price and quantity will be very quick once they open.

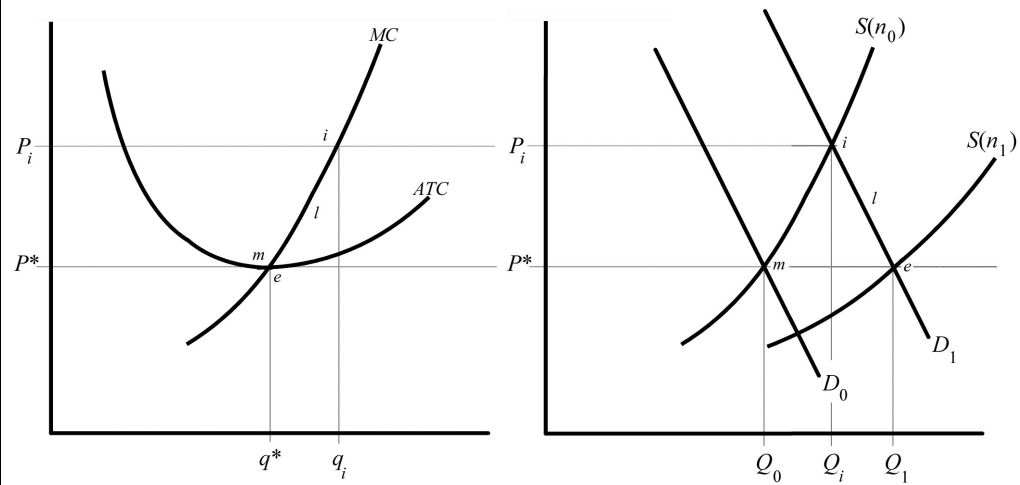
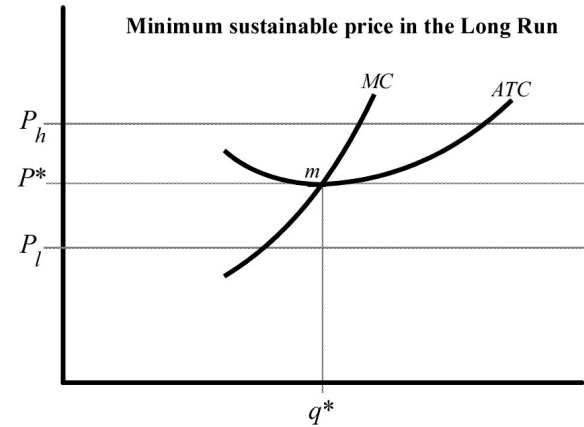


- ① Initial equilibrium  $(P_0, Q_0)$  -- same as previous cases.
- ② Change in number of firms increases supply  $(S(n_0) \text{ to } S(n_1))$ . As new firms begin to sell, arrow ② is amount the new firms wish to sell at  $P_0$  to maximize profit.  
No change in demand (no things other than price have changed for buyers)
- ③ Adjust price. The buyers side: Due to surplus, buyers will either immediately offer a lower price or hold off buying knowing price will fall.  
The sellers side: Same as page ④ under “Decrease in Demand.”
- ④ New equilibrium  $(P_1, Q_1)$  -- find output and profit for each firm at new equilibrium.



**Competition in the LONG RUN**

Minimum sustainable price in the Long Run



**Adjustment to an increase in demand** (from  $D_0$  to  $D_1$ ) in the short run and the long run.

- (m) Minimum sustainable price – long run equilibrium for initial  $D_0$ 
  - Find minimum *ATC* and firm’s output ( $q^*$ )
  - Find market quantity demanded ( $Q_0$ ) at  $P^*$  along  $D_0$
  - Calculate number of firms for  $D_0$ :  $n_0 = (Q_0 / q^*)$
  - Construct  $S(n_0)$
- (i) Increase price in the short run to where NEW demand crosses  $S(n_0)$
- (l) Long run entry of firms due to economic profit – price decreases
- (e) Entry of firms stops when price returns to minimum *ATC*
  - New  $Q$  is at  $P^*$  along  $D_1$  – call it ( $Q_1$ )
  - Calculate new number of firms:  $n_1 = (Q_1 / q^*)$
- (s) Supply curve based on  $n_1$  determined.  $S(n_1)$  can be used for any future short run changes.