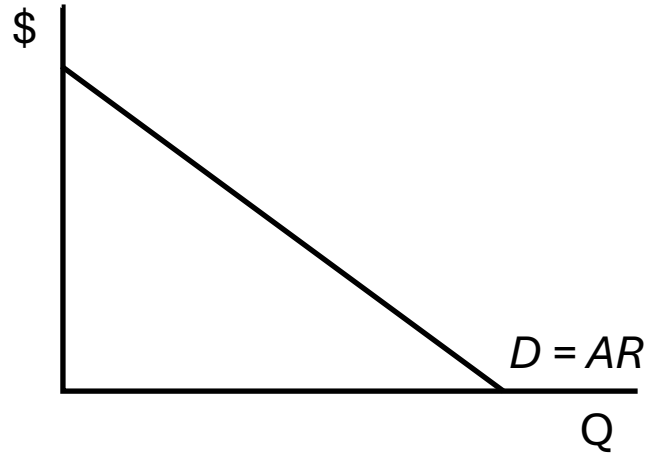
1. Draw the demand curve (*D = AR)* for perfect competition and monopoly.

Perfect Competition

Each firm faces a horizontal demand curve at price *P**.

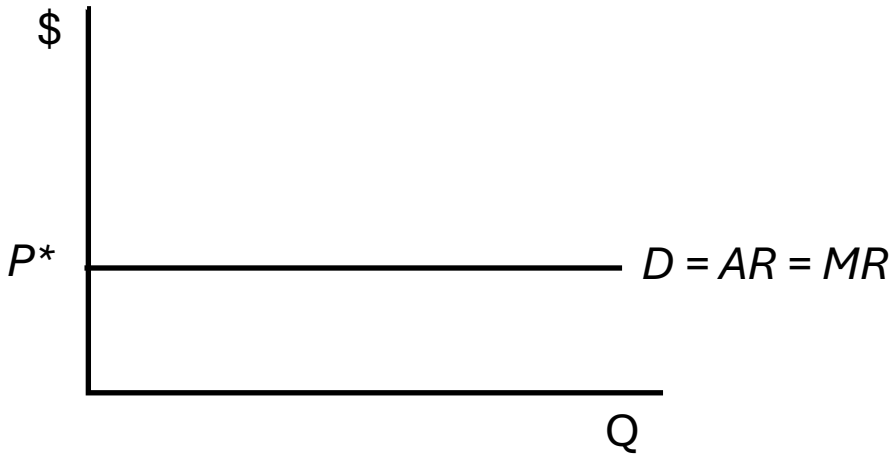
Monopoly



Monopoly has downward-sloping demand curve (relatively inelastic).

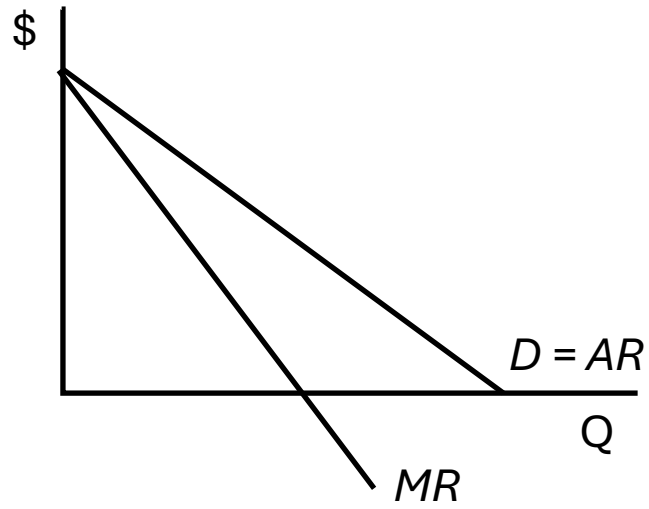
2. Draw the marginal revenue curve (MR) for perfect competition and monopoly.

Perfect Competition



MR is the same as demand curve (*D* = *AR* = *MR*)

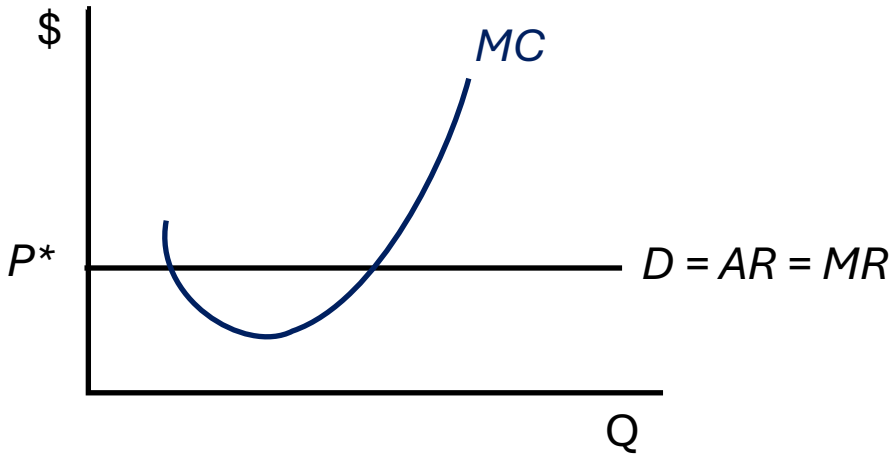
Monopoly



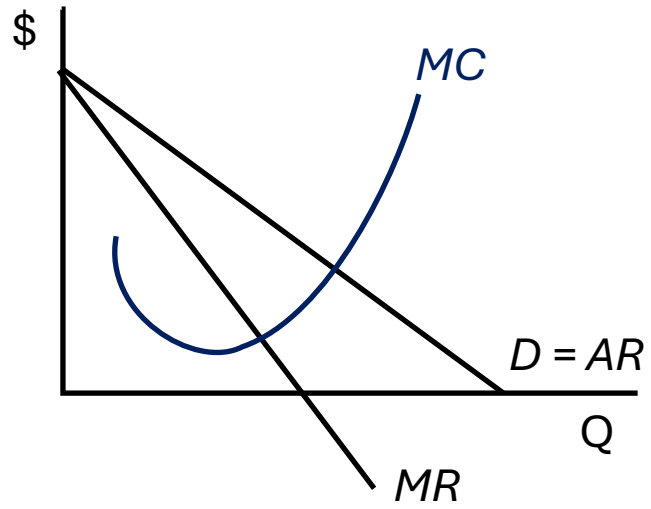
MR is downward-sloping and below the demand curve.

3. Draw in the usual marginal cost curve (MC).

Perfect Competition



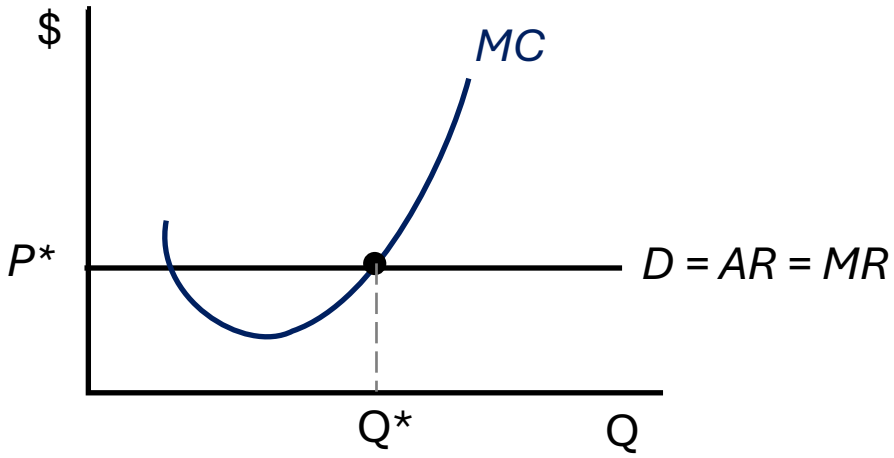
Monopoly



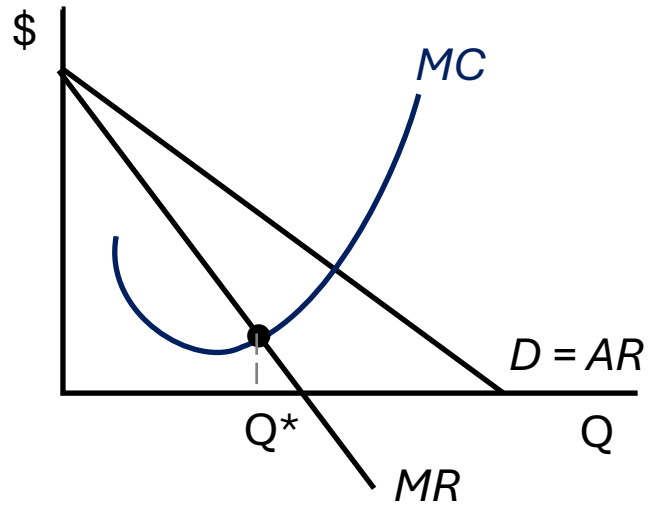
MC follows the law of diminishing returns.

4. Find the profit-maximising output Q^* by choosing the output level where $MC = MR$

Perfect Competition



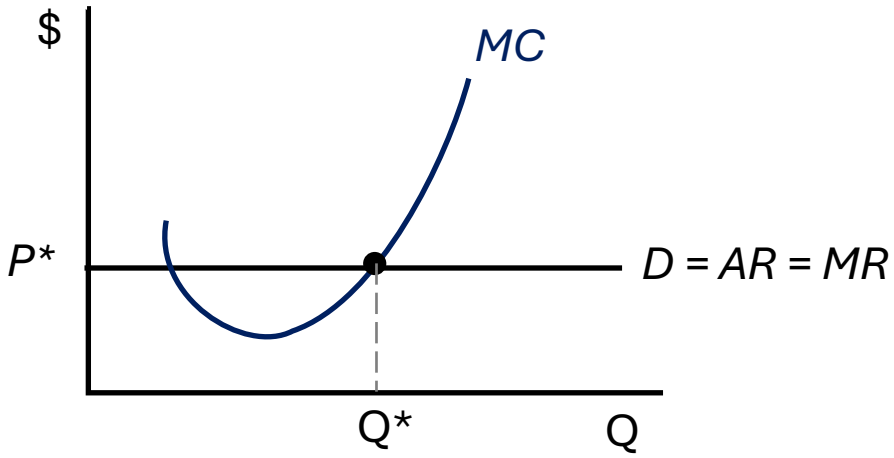
Monopoly



MC follows the law of diminishing returns.

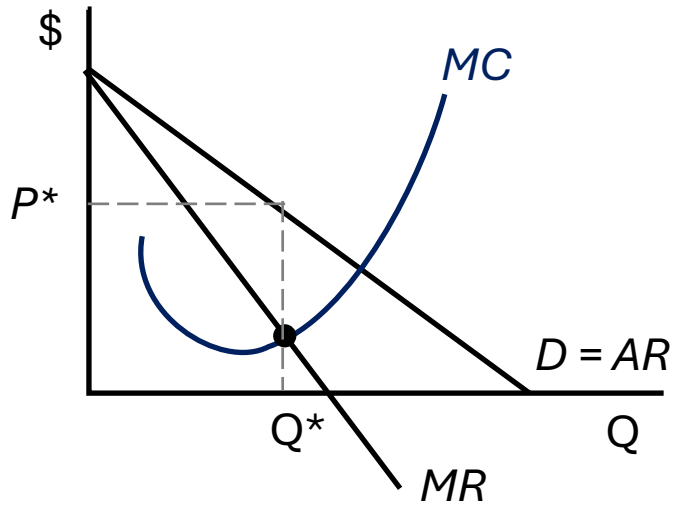
5. Find the price that can be charged for this level of output. The demand curve (AR) tells the price.

Perfect Competition



The price is fixed at $P^* = AR$.

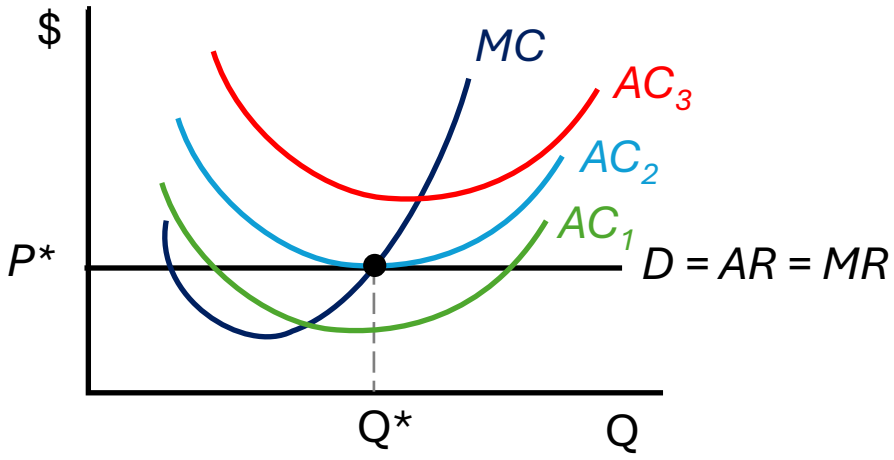
Monopoly



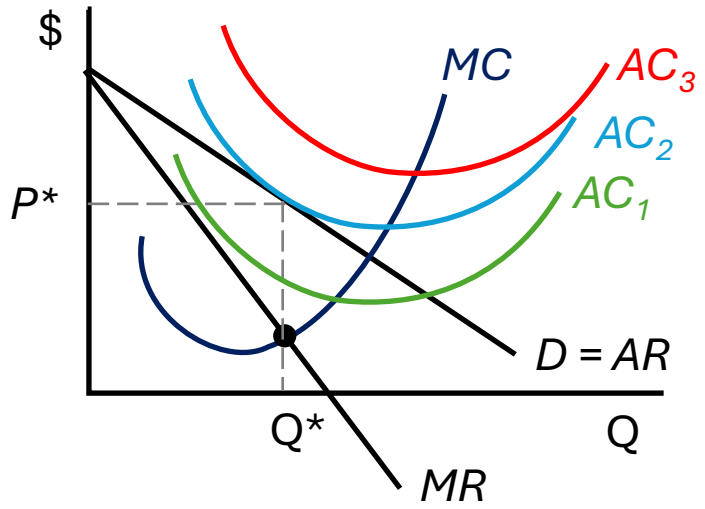
The price will depend on the level of output Q^* on the demand curve (AR).

6. Draw the AC curve so that the MC curve cuts the minimum point on the AC curve. The vertical position of the AC curve will depend on whether we want to show the firms earning profit or losses.

Perfect Competition



Monopoly



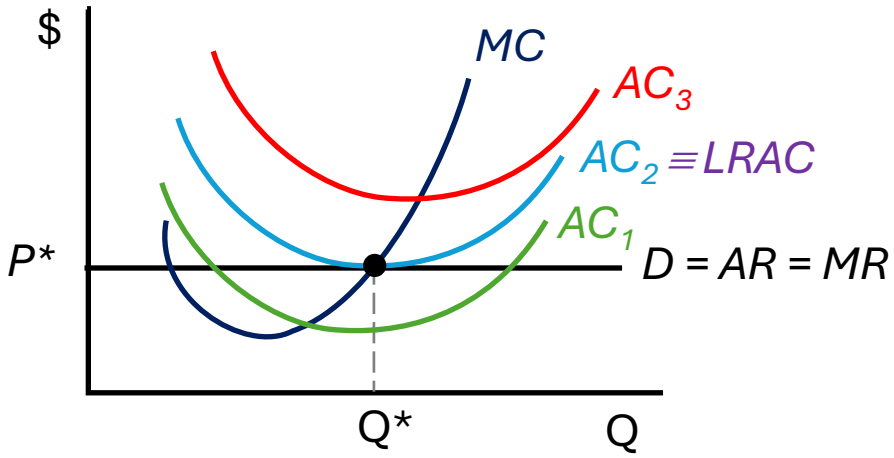
The profit (or loss) is determined by the difference between average cost (AC) and average revenue (AR).

In the short run,

If $AR > AC_1$, then the profit is being earned.
If $AR = AC_2$, then the firm is just covering its average cost.
If $AR < AC_3$, then the losses are being made.

6. Draw the AC curve so that the MC curve cuts the minimum point on the AC curve. The vertical position of the AC curve will depend on whether we want to show the firms earning profit or losses.

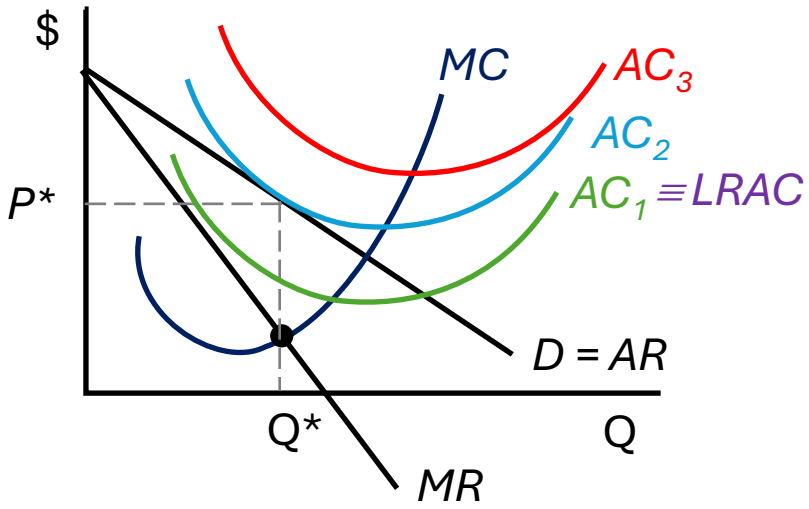
Perfect Competition



In the long run,

Perfectly competitive firms will able to just covering its LRAC, *ie* LRAC is relatively similar to AC_2 or it could be enveloping the AC_2

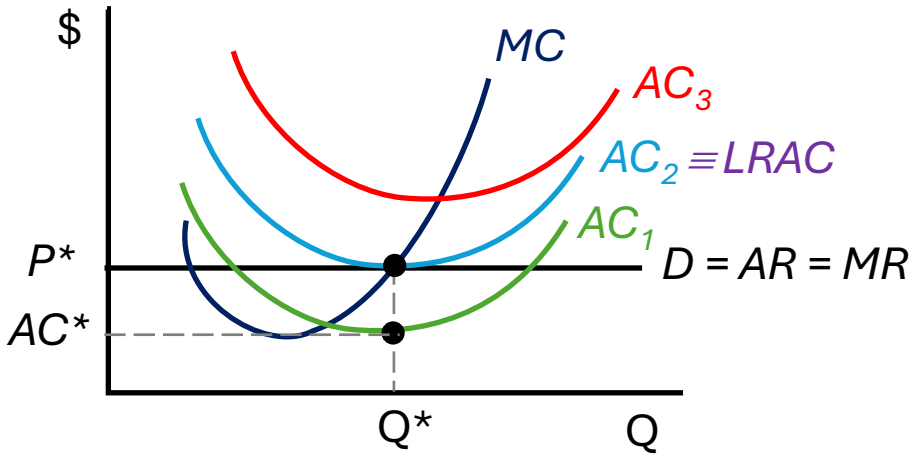
Monopoly



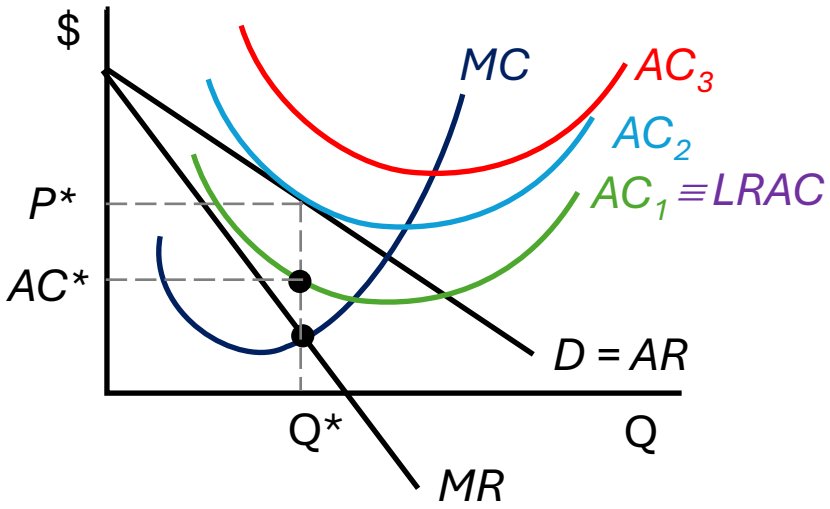
Monopolists are likely to make profits, *ie* LRAC is relatively similar to AC_1 or it could be enveloping the AC_1

7. Find the average cost of making profit-maximising output (Q^*). Mark it on the diagram as AC^*.

Perfect Competition

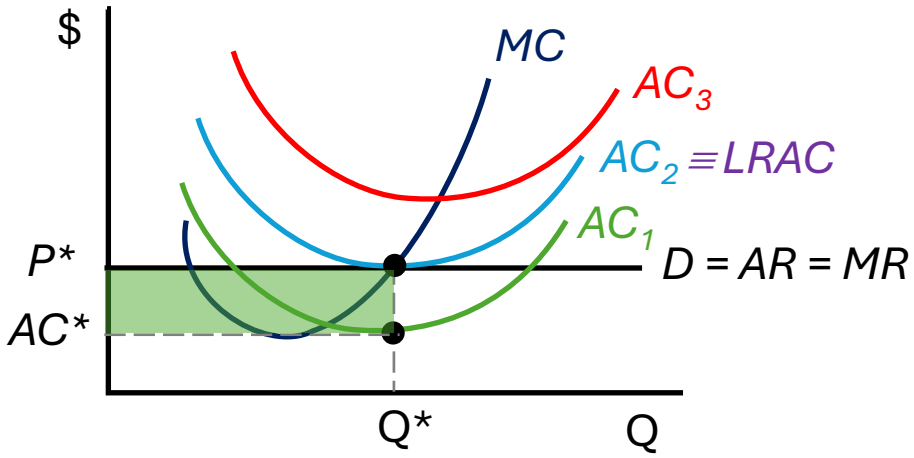


Monopoly

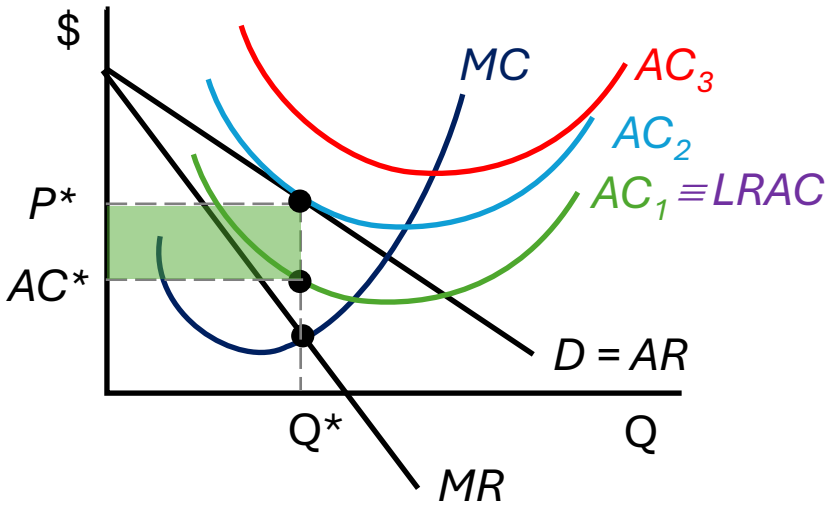


8. Find the level of profit.

Perfect Competition



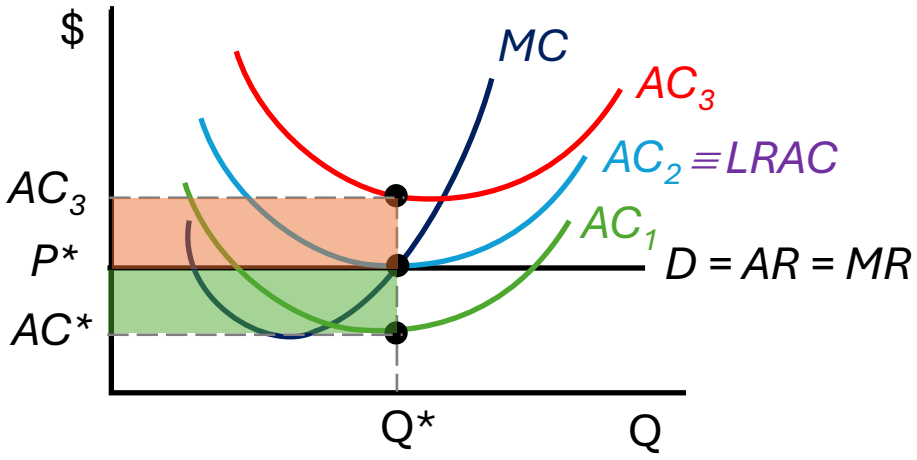
Monopoly



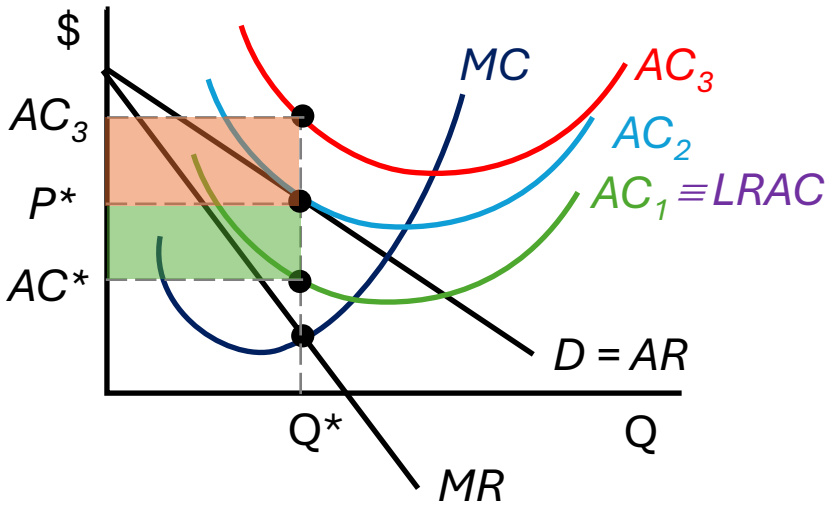
If price exceeds average cost, then the firm is making profit per unit of *(P* - AC*)*.
Total profit is then calculated as *(P* - AC*) x Q*.*

8. Find the level of loss.

Perfect Competition



Monopoly



If average cost exceeds price, then the firm is making loss per unit of $(AC_3 - P^*)$.
Total loss is then calculated as $(AC_3 - P^*) \times Q^*$.

Remember that cost curves have the same basic shape regardless of the market structure, but firm's revenue curves depend crucially on its market power.