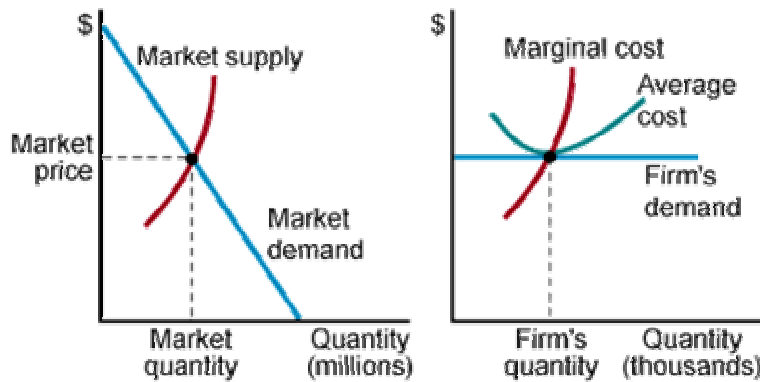
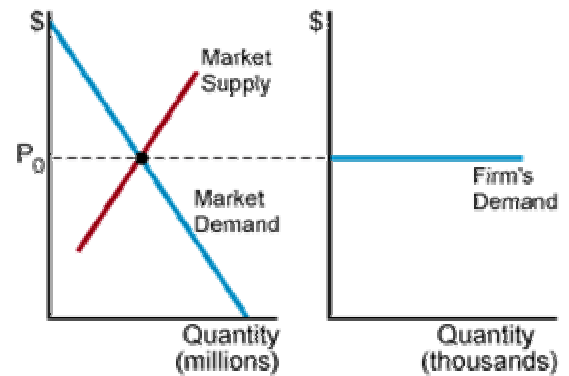


- At left, can you see that the candle producers are experiencing **economies of scale** up to, but not beyond, producing 7 candles a minute?
- Up to that point, **average cost fell** as the scale of production increased.

- At right, can you see the relationship between the perfectly competitive industry and the perfectly competitive firm?

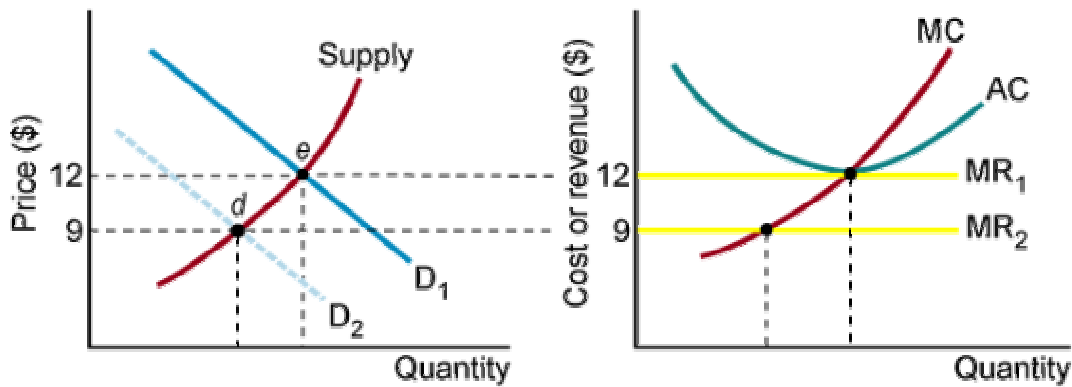
- The **industry establishes a prevailing price**, which must be accepted by the insignificantly small firms that produce an identical good.

- It is for this reason, that a perfectly competitive firm is often called a **price taker**.

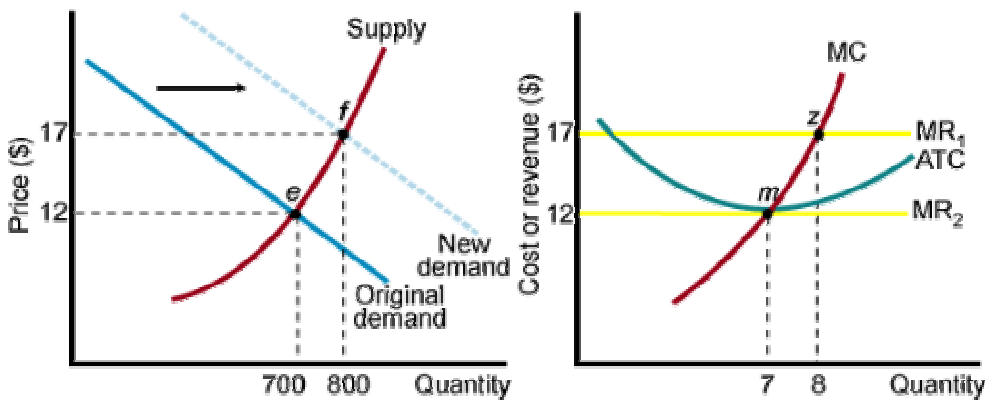


- In this case, can you see that the firm is **breaking even**, since the price it charges is equal to its average cost?

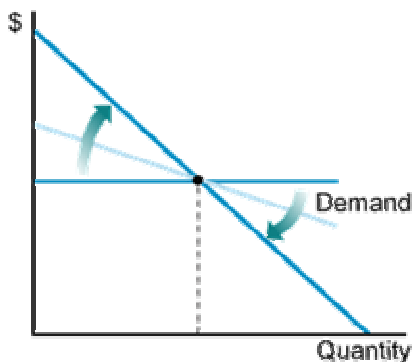
$$\text{Price} = \text{avg. cost} = \text{break even}$$



-Above, when demand fell in the market, the prevailing market price dropped from 12\$ to 9\$. Thus, the demand facing the firm dropped accordingly, as did the average and marginal revenue. And a firm that had been breaking even at 12\$, was now losing money at 9\$.



-Above, when demand in the market rose, price and quantity sold rose for both the industry and the firm. And a firm who was breaking even while selling 7 units at a price of 12\$ per unit, was now making a profit, selling 8 units at 17\$ per unit.

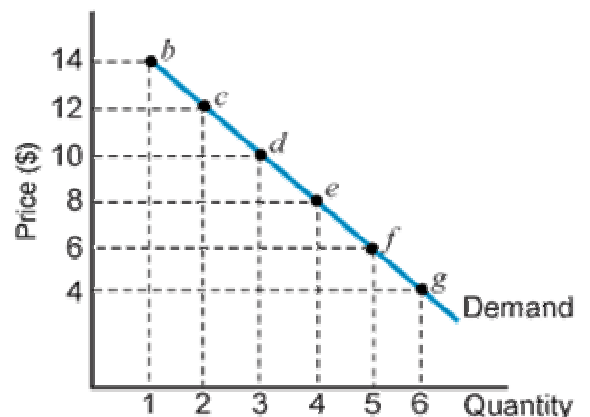


- Can you see that the elasticity of demand falls as the demand curve rotates from an horizontal position to a steeper one?

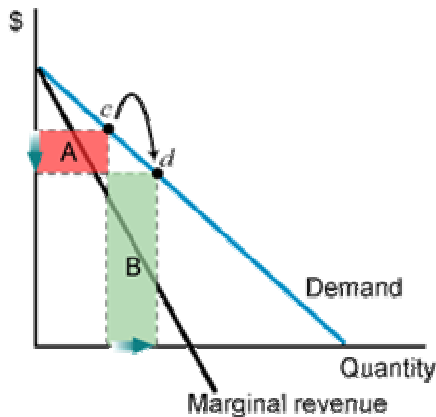
- What sort of **market structures** are associated with these positions?

- What happens to **market power** of the firm as this rotation is made?

- In the diagram at right, can you tell that revenue is maximized at point “e”?

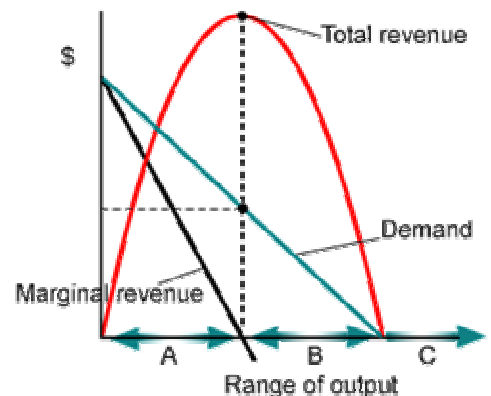


- Do you realize that this means at every other point to the left or right of point “e”, that revenue is less?
- Further, do you realize that all **imperfect competitors** face a demand for their goods that is somewhat like this one?

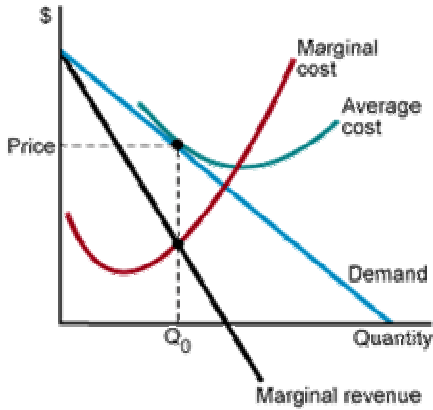


- Can you see that as you move from point “c” to point “d”, you lose revenue equal to area “A”, while gaining revenue equal to area “B”?
- Can you see that area “B” is larger than area “A”?
- Why is this the case?

- Note that as you approach the **midpoint** of the demand curve, that **revenue is maximized**.
- Also note, that **revenue is maximized where marginal revenue is zero**. And beyond that point, marginal revenue becomes negative.



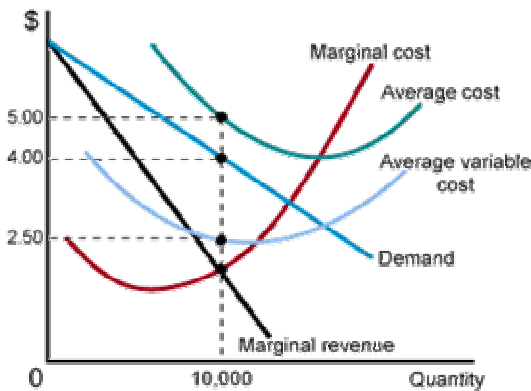
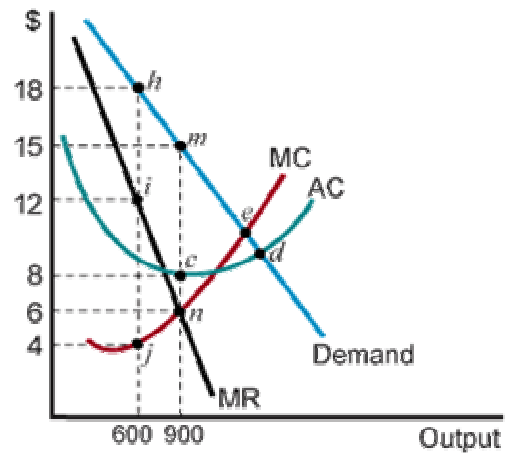
- Finally, since **marginal cost cannot be less than zero**, it cannot intersect marginal revenue when it is negative.
- This means that **imperfect competitors**, like monopolists, will never, freely with good information, produce beyond the midpoint of the demand curve facing them. They will always **produce at or below the midpoint, in the elastic range of the demand curve facing them**.



- Can you see.....

That this is an imperfect competitor?
 That its optimal level of production is Q_0 ?
 That the best it can do is break even?

- At right, marginal revenue equals marginal cost at 6\$.
- Optimal output is 900 units.
- Optimal price is 15\$.
- Total revenue equals 13,500\$.
- Total cost equals 7,200\$.
- Profit equals 6,300\$.
- Average profit equals 7 \$.



- At left, optimal output is 10,000 units.
- Optimal price is 4 \$.
- Total revenue is 40,000\$.
- But....

Average cost is 5 \$
 Average loss is 1 \$
 Total cost is 50,000\$
 And losses, though minimized, are 10,000\$

I'll leave the last one for you.....

- Is this a perfect or imperfect competitor?
- How do you know?
- What are MR and MC when they are equal?
- What is optimal output?
- What is optimal price?
- What is total revenue?
- What is total cost?
- What is average profit?
- What is total profit?

