Monopoly Demand Curve

Chapter 15-2

The Demand Curve Facing a Monopoly Firm

- In any market, the **industry** demand curve is **downward-sloping**. This is the result of the **law of demand**.

Monopolist is the Industry

- Critical to understanding the profit maximization of the monopolist is remembering that the **monopolist** **is the industry** because it is the sole producer.
- Therefore the monopolist confronts a downward-sloping demand curve. **The industry demand curve is the firm's demand curve.**

The Key Difference Between a Monopolist and a Perfect Competitor

- A monopolistic firm's marginal revenue is *not* its price
  - Marginal revenue is always below its price
  - Marginal revenue changes as output changes and is not equal to the price

- A monopolistic firm's output decision can affect price
- There is no competition in monopolistic markets so monopolists see to it that monopolists, not consumers, benefit

Marginal Revenue

- Recall that the **marginal revenue (MR)** is:

$$MR = \frac{\Delta TR}{\Delta Q}$$

The Monopolist's Price and Output Numerically

- Remember is that ***marginal revenue*** is the change in total revenue that occurs as a firm changes its output.

TR=P x Q

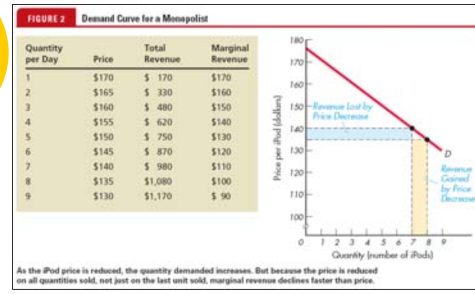
MR = Change in Total Revenue / change in output

Another way to say it is:
"how much does your Total Revenue changes as you increase output"

Marginal Revenue < Price

- MR is less than price for a monopoly firm.
- The MR is less than price and declines as output increases because the monopolist must lower the price in order to sell more units (because the demand curve slopes downward).

Demand Curve for Monopoly Firm



Quantity per Day	Price	Total Revenue	Marginal Revenue
1	$170	$ 170	$170
2	$165	$ 330	$160
3	$160	$ 480	$150
4	$155	$ 620	$140
5	$150	$ 750	$130
6	$145	$ 870	$120
7	$140	$ 980	$110
8	$135	$1,080	$100
9	$130	$1,170	$ 90

As the iPod price is reduced, the quantity demanded increases. But because the price is reduced on all quantities sold, not just on the last unit sold, marginal revenue declines faster than price.

The Monopolist's Price and Output Numerically

- When a monopolist increases output, it lowers the price on all previous units.
- As a result, a monopolist's marginal revenue is always below its price.

Average Revenue

- Whenever MR is greater than AR, AR rises.
- Whenever MR is less than AR, AR falls.
- Average revenue is:

$$AR = \frac{P \times Q}{Q} = P$$

Average Revenue > Marginal Revenue

- Note that the AR is the same as price. In fact, the **AR curve is the demand curve**.
- With a downward-sloping demand curve, prices fall as output increases. This means that AR falls.
- **MR must always be less than AR.**

Demand and Revenue for the Monopolist