10.53- Profit Maximization

10.53- Determine the profit-maximizing level of output using the optimal output rule.

Kickoff:

- ❖ Go to Google Classroom and complete the assignment **"11/22- KO"**
    - ➢ The real cost of nice shoes
- ❖ **Roll Call:** Favorite shoe brand

Announcements:

- ❖ **11/26-** Quiz
    - ➢ Modules 52 & 53
        - ■ Readings and class discussions
    - ➢ Have Module 54 read
- ❖ 90 minute classes
- ❖ 4th Lunch
- ❖ Heels play Mercer tomorrow @ 3:30 in Chapel Hill
- ❖ **11/27-** Start Thanksgiving Break

Explicit v. Implicit Cost of… Going To College

❖ You may talk with people around you but this should be done individually
❖ In this assignment you will find both the explicit and implicit cost of attending a 4 year university.
❖ I will be calling people to the back table to discuss the FRQ from last weeks test

10.53- Profit Maximization

10.53- Determine the profit-maximizing level of output using the optimal output rule.
By: Carter Greene

Key Assumption:

- ❖ Cost numbers we discuss today include ALL COSTS
  - ➢ Explicit and implicit
- ❖ Firms base their decisions of whether or not to stay open off of:
  - ➢ Economic Profit
- ❖ Must make a Normal Profit

Again, our goal as a business is to… ?

❖ Maximize profits
❖ In order to do this, we need to sell the optimal __Quantity__ of our product at the optimal ___Price___.
❖ Price is set by the factors of what?
  ➢ Supply and Demand
❖ So let's figure out the quantity **our** firm should produce.
❖ In economics we always want to think on the __Margin__.

Marginal Analysis

❖ <u>Marginal Cost</u>
  ➢ Change in total cost from one more unit of output

$$MC = \frac{\text{Change in total cost}}{\text{Change in output}} = \frac{\Delta TC}{\Delta Q}$$

❖ <u>Marginal Revenue</u>
  ➢ Change in total revenue from the sale of an additional produce
  ➢ MR = Price

$$\text{Marginal Revenue} = \frac{\triangle \text{in TR}}{\triangle \text{in Q}}$$

Profit Maximizing Rule

❖ **MR = MC**
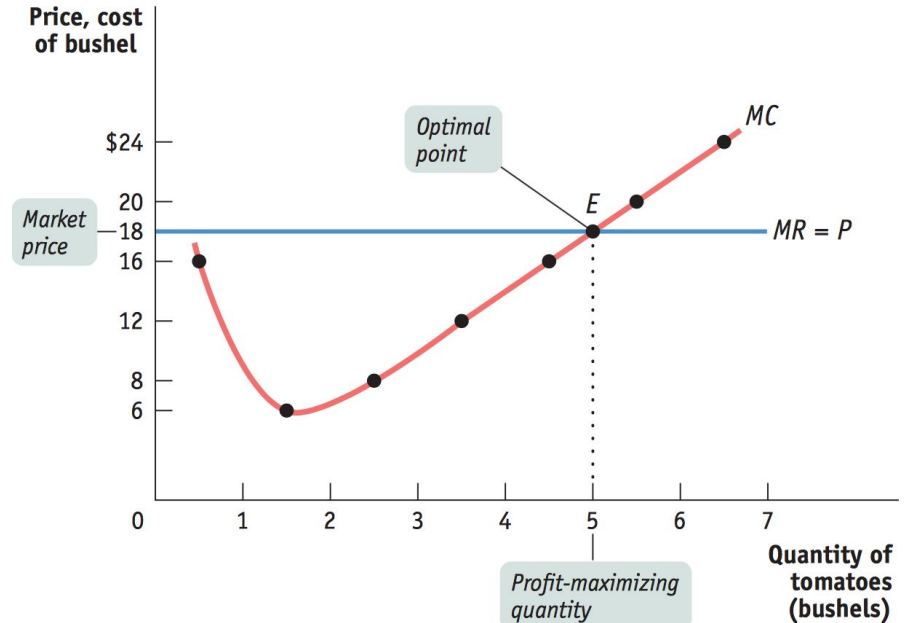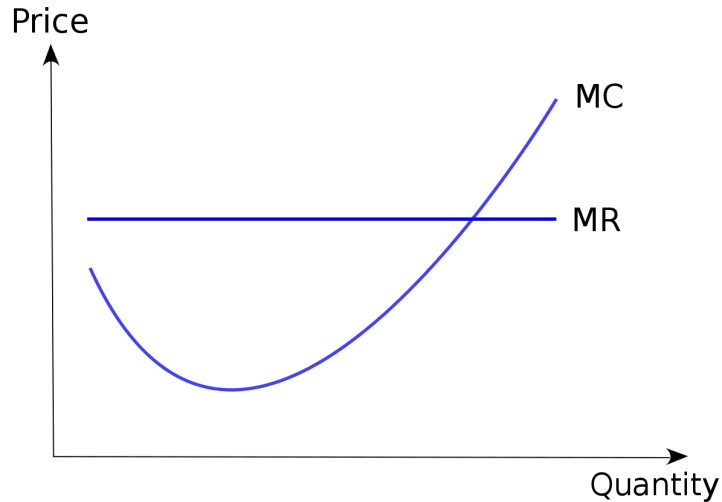 ➢ The most important rule in Microeconomics
❖ If MR > MC
  ➢ Keep frikin producing!!!
  ➢ Because what is increasing?
❖ If MR < MC
  ➢ Quit frikin producing!!!
  ➢ What's happening to Profit??

Profit Maximizing Quantity- Graphically

❖ Profit maximizing quantity = intersection of MC and MR

Profit Maximizing Quantity- Looking at a Table

❖ Steps to finding optimal output:
  ➢ Find MC
  ➢ Identify MR
  ➢ Compare MR and MC
  ➢ Determine where MR and MC are equal

❖ Price = $20
❖ Find the profit maximizing quantity

Q	TC	MC	MR
0	20		
1	30		
2	35		
3	45		
4	60		
5	90		
6	130		

10.53- Practice

❖ Complete the front side of the 10.53 practice worksheet with the person sitting beside you

❖ I will put the answers on Google Classroom this afternoon so you can check yourself to make sure you have this down

❖ Then, individually, complete the back by doing your own research if necessary
  ➢ This will help us on Monday

Closure