Econ 1101
Summer 2013
Lecture 1

Section 005
6/17/2013

Welcome!

- Principles of Microeconomics!
- Instructors: **Radek Paluszynski** (first half)

  Jinyue Li (second half)
- Third-year PhD student in the Department of Economics – from Poland / US
- E-mail: **palu0041 @ umn.edu**
- Website: www.econ.umn.edu/~palu0041/
- Office: Hanson Hall 3-155
- Office Hours: M,T,W,Th 3.30-4.30pm
  - During my part of the course (Jun 17th – Jun 27th)

Agenda for today (1st part)

- Introduction to the course (administrative stuff, general overview of what we do in Economics)
  - This will be sort of sketchy. You are required to read the syllabus!
- Tour de Aplia
- Textbook Economics
- Models

Agenda for today (2nd part)

- Auctions – a „warm-up” to Supply and Demand
- Wholesale Electricity Auctions in the United Kingdom
- Working with data and a spreadsheet – HW1 demonstration.

Course Overview (1st part)

Month	Day	Topic	Chapter	HW due?
June	17	Intro/Principles/Math	1,2	
June	18	Supply and Demand	4	√
June	19	Elasticities, Consumers and Producers	5,7	√
June	20	Taxes and Regulation	6	√
June	24	Externalities and the Public Sector	8,10,11	√
June	25	International Trade	3,9	√
June	26	Intro to Consumer Theory, Midterm Review	21	√
June	27	**MIDTERM**		
June	28	–		√

Lectures

- Do:
  - Ask questions if you are confused
  - Point out any mistakes I may have made
- Don’t:
  - Chat with your neighbors
  - Talk on the phone
  - Play loud music, make other noises…
  - Eat smelly or noisy food
- OK:
  - Using your computer/tablet to take notes or follow along with the slides or read newspapers
  - Coming in or leaving quietly at any point
  - Sleeping (although I know much better places to do that)

E-mail

- I will send you e-mails from time to time. You should have already received the first one.
- In case you haven't, check your UMN junk mail!
- This is my preferred way of communicating with you (outside our classes or office hours)
- Please start the title with [Econ-1101]

Office hours

- Questions regarding lecture contents, the class in general, etc.
- Last resort help for homeworks
- Important note: the Department of Economics locks up at 4.30pm every day.
- In case you happen to arrive after 4.30 and the door is closed, ring my office phone: 612 624 9357 so that I can let you in ☺

Recitations

- Last hour of the last day of each week.
- Your TA – Sergio Salgado – is really awesome.
- His office hours are: M,T,W,Th 9.00-10.00am
  - Throughout the whole course (4 weeks)
- Recitations will serve as a review session for the lecture contents. You will go over some additional exercises and worksheets.
  - Midterm and final review sessions in weeks 2 and 4, respectively
- Think of your TA and I as a team to help you go through this class and make it enjoyable for you.

Course information

- General course information (syllabus, instructions for Aplia registration) can be found on my course website.
- Please: READ THE SYLLABUS!
- Important course announcements by e-mail or Aplia.

Course info, cont'd

- This course is very intensive and requires a lot of work outside the classroom!
- Daily on-line homeworks are due at 11:45pm
  - First one – tomorrow night
- Many subsequent lectures will build on the material covered in the previous ones.
- It's crucial that you don't fall behind.
- If you do, ask questions during classes and during office hours (mine or Sergio's).

How this class will work

- Lecture is the main deal.
  - Text is a complement, not a substitute.
  - Before each class, the preliminary lecture slides for that day will be posted at:

    www.econ.umn.edu/~palu0041/summer2013.html
  - The annotated slides will be posted after each class.
- Reading Assignments from the textbook
- Outside Readings on Aplia
- Homework questions may be slightly detached from the lecture contents sometimes.

How this class will work, cont'd

- Exams
  - Mostly multiple choice questions
  - 1-2 open questions (depending on my current creativity)
  - Some sample questions (from old exams) will be posted on the website along with an answer key.
- Grading scheme:
  - Homeworks 30%
  - Midterm 35%
  - Final (non-culumative) 35%

Exams

You need to be able to take these exams. This is posted in advance so you can make any adjustments to your schedule. No make-ups will be offered. In the case of a documented emergency, the grading weight of one of them will be put on another one.

- Midterm: Thursday, June 27th, 5:40-7:40pm
- Final: Thursday, July 11th, 5:40-7:40pm

Note: If you miss both exams, you will need to take an incomplete or drop the class.

Aplia

- Homework delivered online at aplia.com
- You need to pay for an account ☹
  - Bookstore bundle: (Aplia, hard copy text+online text). Don't lose the code!
  - Purchase only Aplia (get online text) at http://login.cengagebrain.com/

- Follow instructions for picking your Aplia section (posted on my website)
- Course key that you will need: **GF73-5DPB-MN2W**

Aplia, cont'd

- REGISTER WITH YOUR UMN EMAIL!!!!!!!!!
- I will do a quick demonstration of Aplia in class. There is also a "free points" assignment to help you with using Aplia.
- There is a grace period until: 7/7 during which you can start using Aplia without an access code.

Math requirements

- Basic high school algebra and geometry knowledge is assumed.
  - Comfort with graphs – a coordinate plane and linear functions – is of particular importance in economics
- If you don't feel very comfortable or need a refresher, take a look at a review sheet called *math.pdf* created by my colleague Simone (posted on website).
- The first homework on Aplia teaches you how to use the math and graphing tools to solve homework.

What is Economics?

I like to think of Economics as the study of human choice.

The choices of individuals to best allocate **scarce** resources.

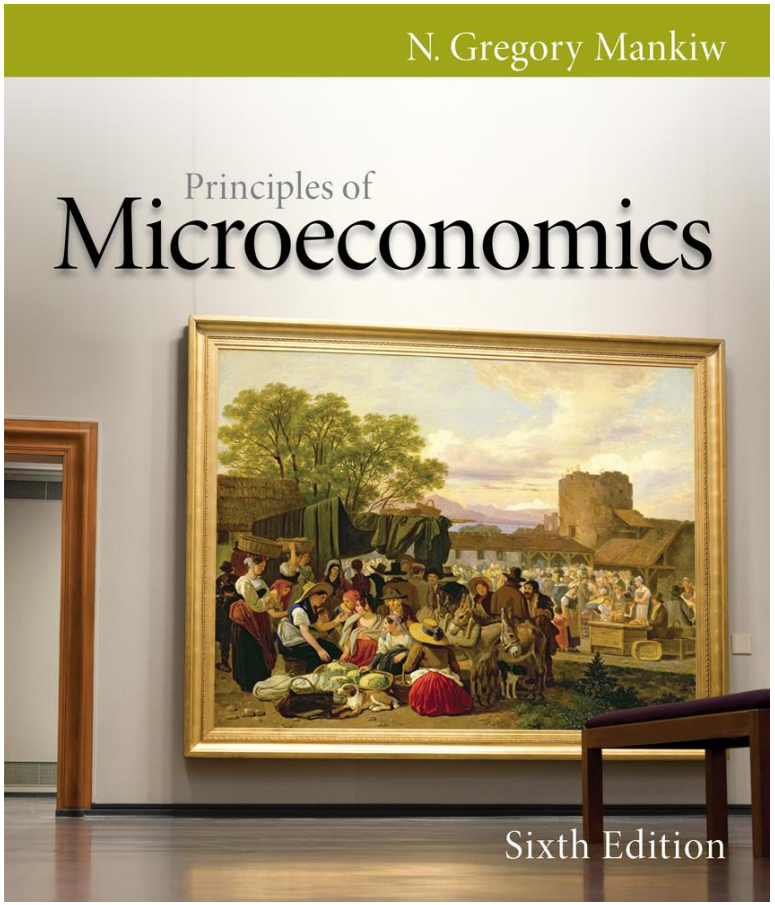
- Think of scarcity as unlimited wants & limited resources

Why do consumers make the decisions that they do? How do they respond to incentives?

Why do firms make the decisions that they do? How do they respond to incentives?

How does it all work together?

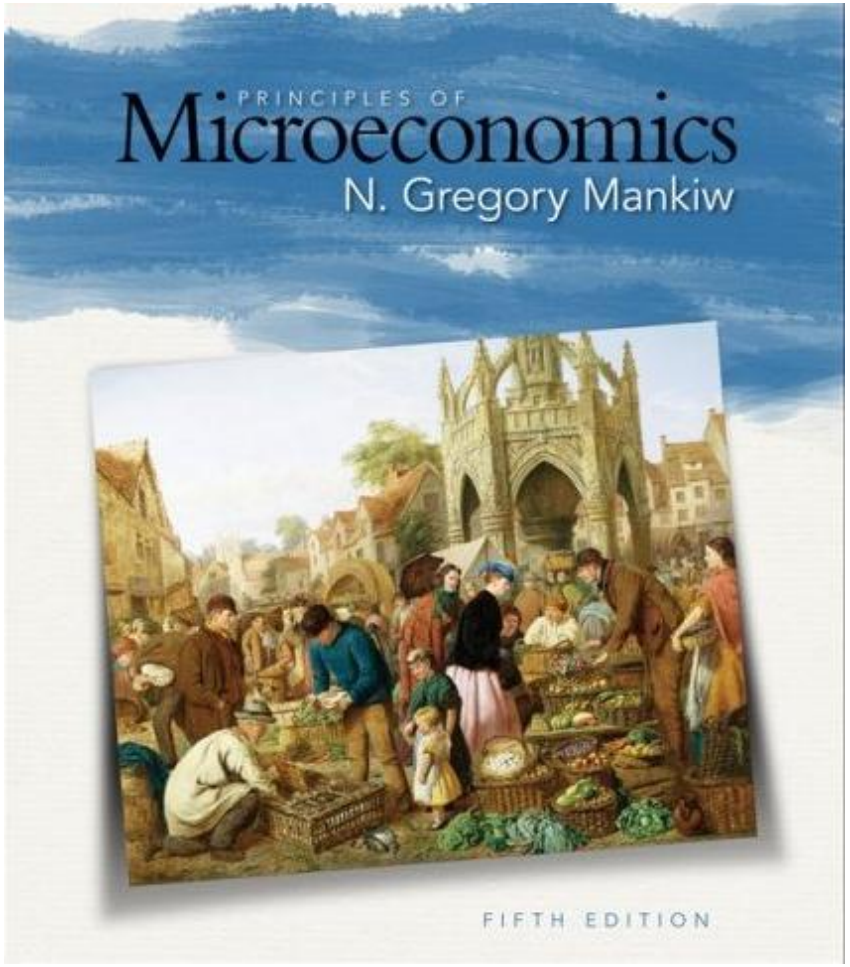
Textbook Economics (1)



6th Edition (2011)

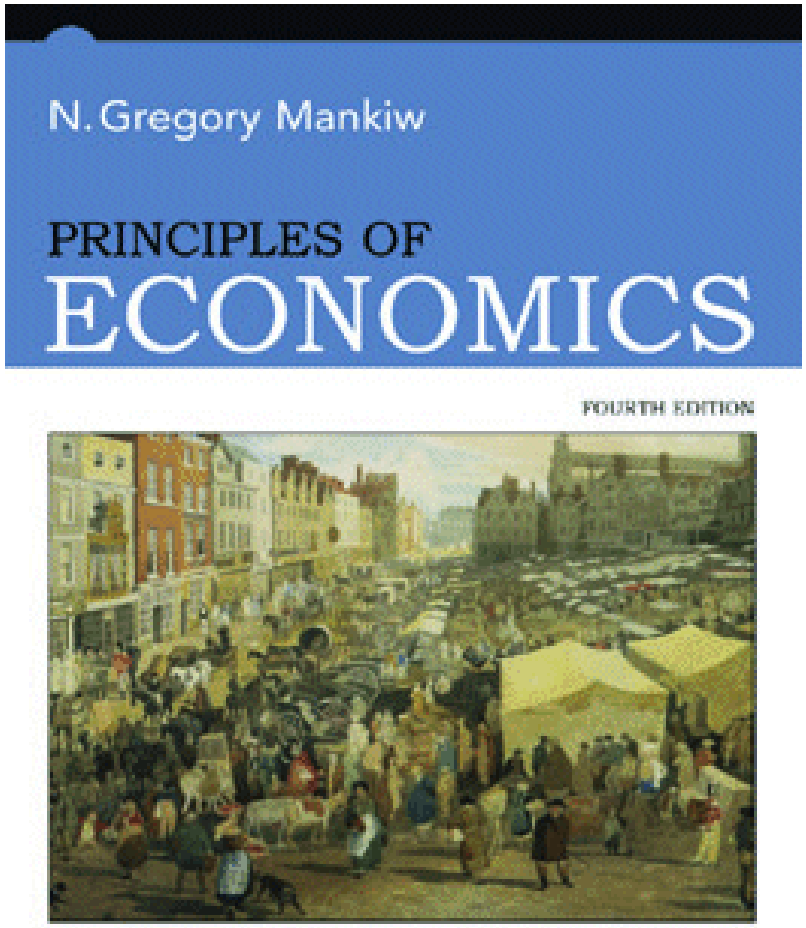
- Amazon new: $171.94

Textbook Economics (2)



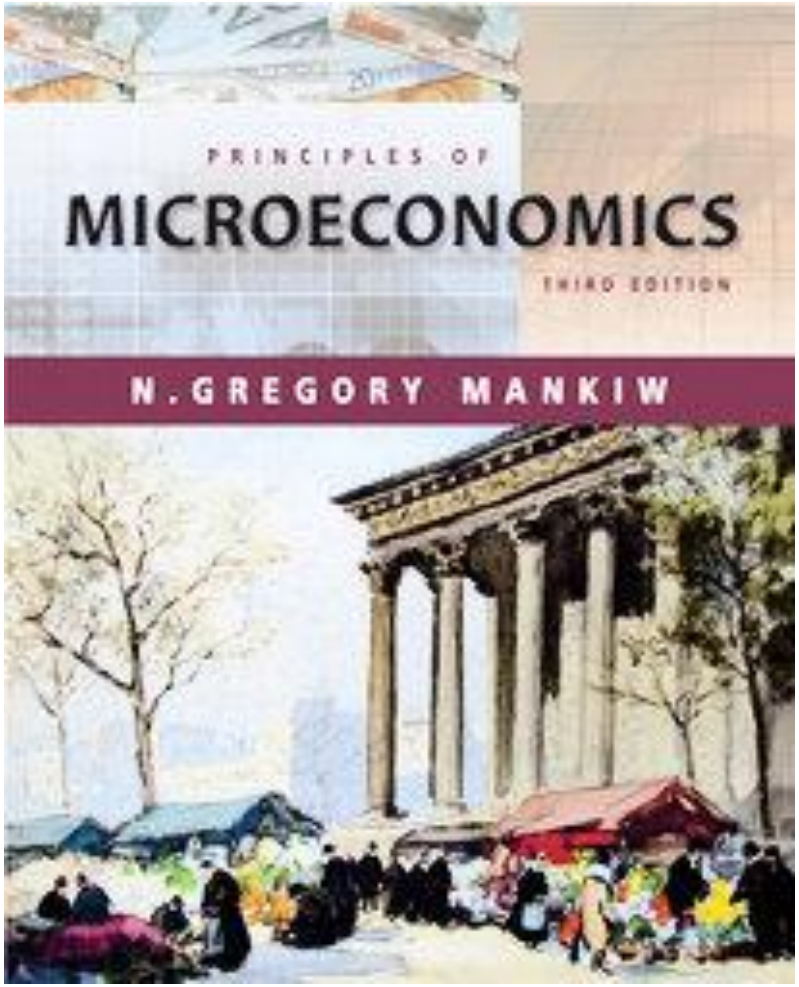
- 5th Edition (2009)
- List $175.02
- Amazon new: $70.33
- Used: $19.90

Textbook Economics (3)



- 4th Edition (2007)
- New: $111 (In 2007)
- Used: $18

Textbook Economics (4)



- 3rd Edition (2003)
- $2.50 (+$3 S&H) at Abebooks.com

Textbook Economics, cont'd

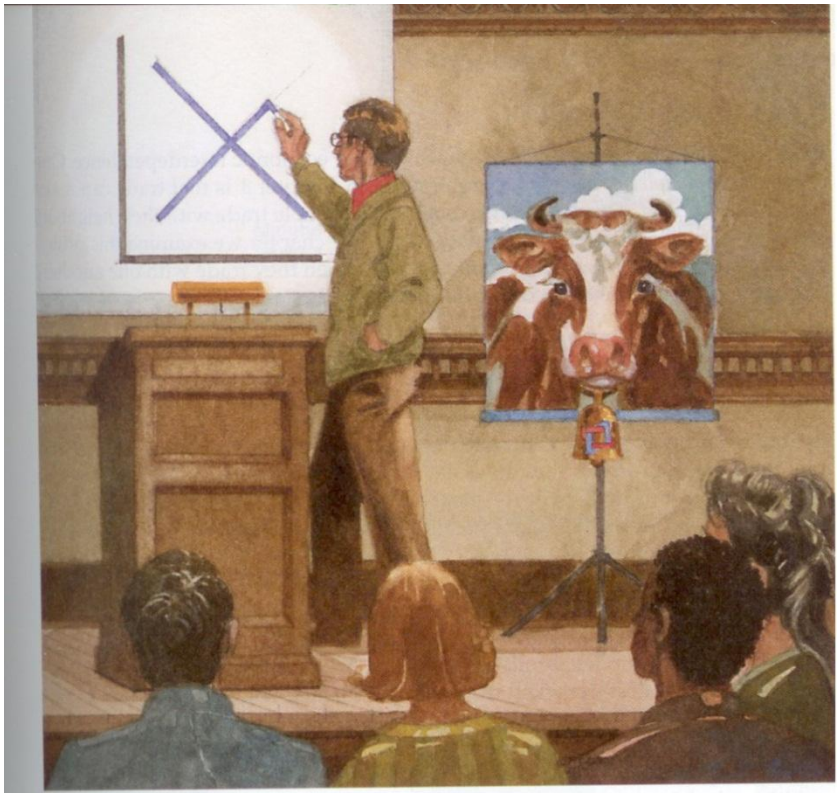
So in what way are the new editions better? Why can't you just buy a third, fourth, or fifth edition instead of the sixth edition?

- Suggestions?

Textbook Economics, cont'd

The pictures! (The text is the same)

- 3rd Edition: Boring Old Male Professor with Whiteboard

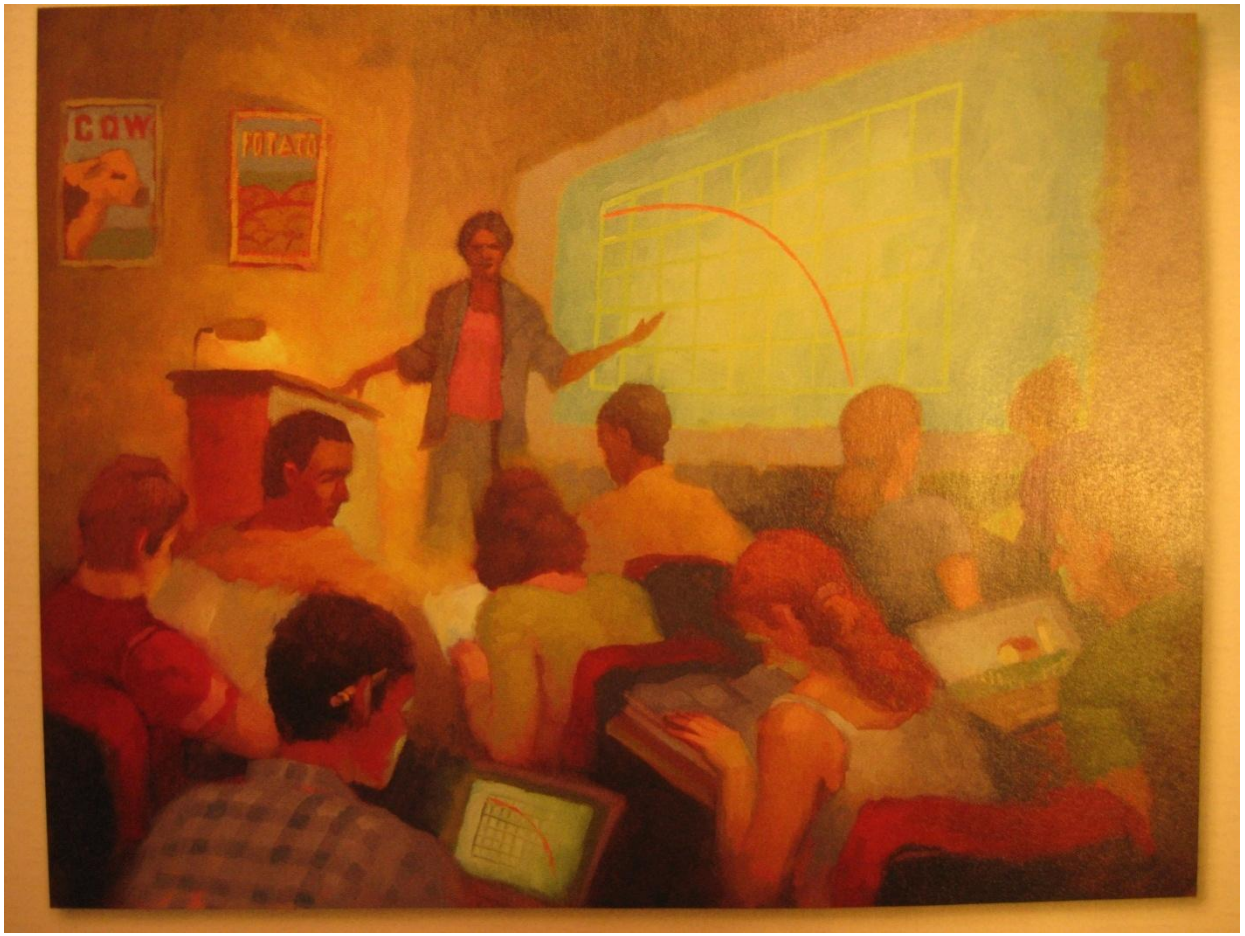


- 4th Edition: Female Professor with Powerpoint!

Note: the cow is still there

- 5th Edition: Cool Female Professor

- Plus Students Get Laptops!



Note: the cow still there

- 6th Edition: not much changed, except students are now wearing very nerdy shirts

Note: the cow still there

Textbook Economics, cont'd

Lesson 1. Textbooks are durable goods

- Like a car (not like a cheesecake)
- The new edition comes out, it's sold to everybody in the first semester.
- Students sell them back to the bookstore and after the first semester used books drive down new books sales.
- Unlike a car, consumer needs a book for a short time.

Textbook Economics, cont'd

What can a book publisher do then?

Answer: Kill off the used market.

Strategy 1: New edition (every 3 years) Most importantly, change page and problem numbers.

Strategy 2: Bundle content, like online homework, so that payment is mandatory in consequence.

Strategy 3: Mutilate books when the opportunity arises. Like for you. (For our bundle: the publisher incurred higher costs to mutilate our hard copies... and kill off the resale potential)

Textbook Economics, cont'd

Lesson 2: Demand for textbooks is **inelastic** (relatively insensitive to price).

So there is an incentive for firms to set a high price.

- For students, price of textbook a small part of the much larger cost of being in college. So students (or parents) pay the high prices so as not to mess up the investment.

Incentive Problem for Professors/Instructors:

- Don't pay for the books themselves. Like doctors prescribing medicine not ordering generic versions of drugs.

Textbook Economics, cont'd

- Our analysis of textbooks sort of gives us an idea of how economists like to look at the world.
- How do economists solve problems?
- They use models!

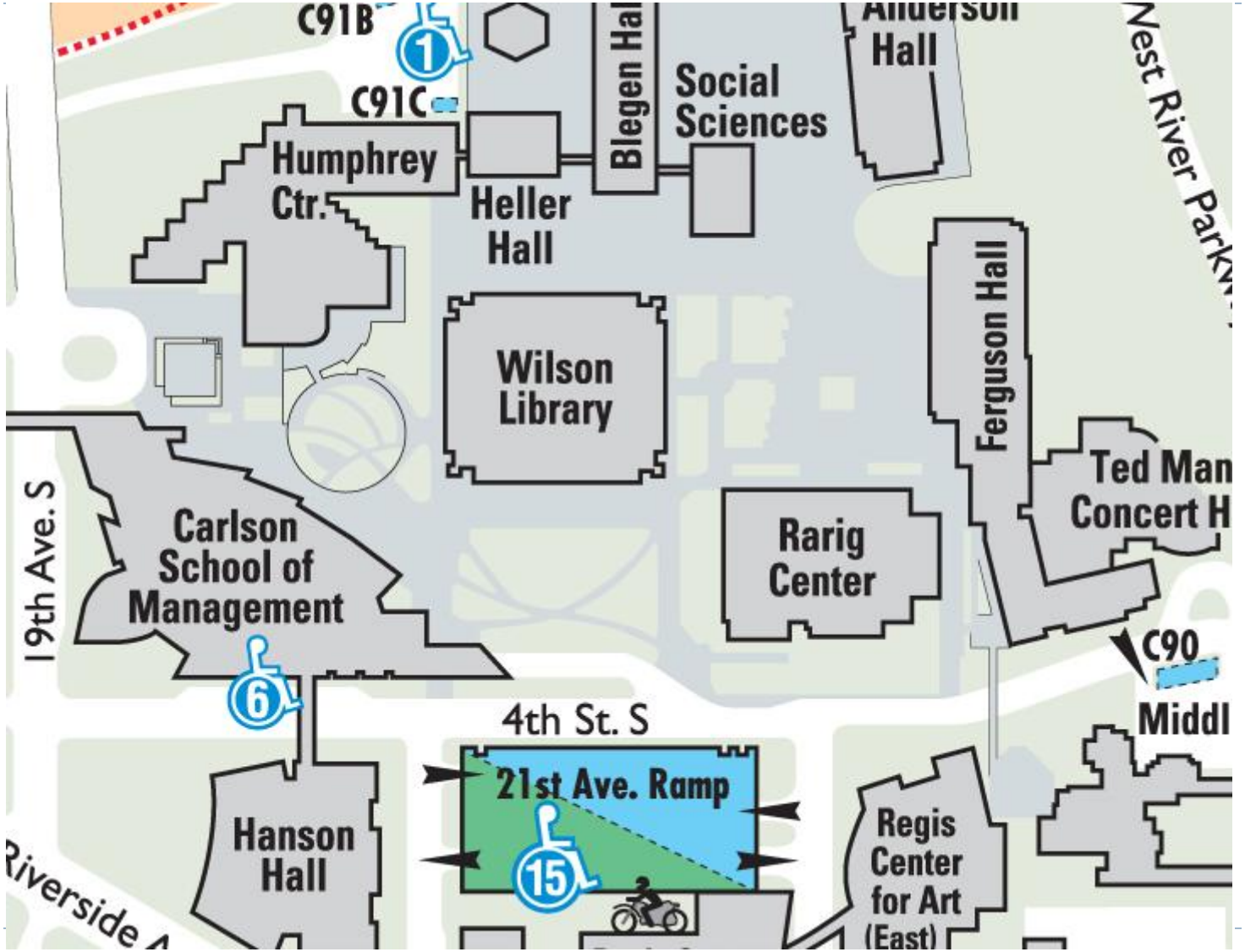
Economic Models

In a lot of ways, Economic models can be thought of as a map.

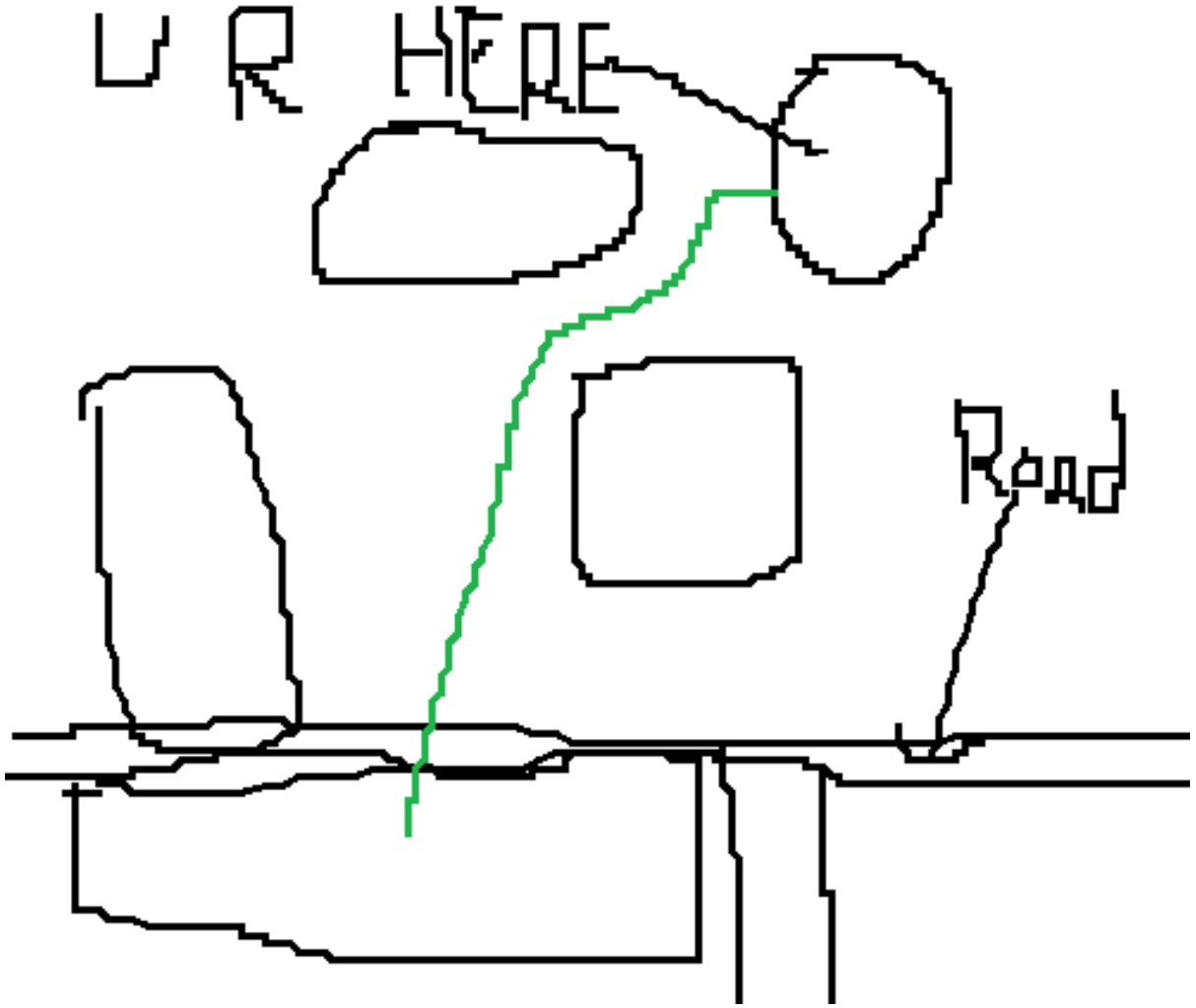
If I were to explain to you how to get to Hanson Hall (for my office hours), I could:

- Show you a precise map:

- Or show you a less detailed map:



- Or even draw you one!



Economics Models, cont'd

- All of those maps were trying to explain the same thing, but some with more details than others.
- In the same way, when we study human behavior and choice, there are way too many variables to account for everything.

Economics Models, cont'd

- Thus, as economists, we simplify things by making models that perhaps are not exactly like real life, but that will still tell us something about the world and how it works.
- For example, we make assumptions like there are infinitely many producers, consumers are rational or that goods are infinitely divisible.
- In the end, we still get something valuable – much like the maps. Even the one I drew will give you an idea of where you are/going… I think.

How about a 15-minute break now?

- Some announcements in the meantime:
  - HW 1 due 11:45 pm CST on Aplia tomorrow (Tuesday)!
  - Readings for today: Chapters 1 and 2 in the text and Reading 1 (all available on Aplia).
  - In-class experiment tomorrow on Aplia:
    - Last part of the class (after regular lecture)
    - Bring your computers (or know where to find a computer lab on campus)
    - Go through the pre-experiment homework on Aplia beforehand (even though it's due a few hours afterwards)!

Auctions

- An important form of market exchange (treasury bills, cell phone spectra, etc.)
- And relatively easy to see how they work (so a good warm up)

- Let's discuss a few types of auctions and illustrate them with experiments.

Auctions, cont'd

- Auctions can be either **single-sided** or **double-sided**
  - Who can guess what the differences may be?

Auctions, cont'd

- Single- and double-sided refer to the party that bids.
- In a single-sided auction, only buyers or only sellers bid.
- In a double-sided auction, both are bidding. We will see more of this tomorrow when we do an experimental auction on Aplia.

Auctions, cont'd

- Auctions can be:
  - Sealed-bid
  - Open outcry

Auctions, cont'd

Now we will do a few experiments. This will hopefully:

- Illustrate that economists sometimes do research through experiments.
- get you ready for the experiments tomorrow.
- get you ready for the way things work in "Econland" (an imaginary economy we will create for this course).

Auctions, cont'd

Experiment I: single-sided, sellers submit bids, sealed bid, pay as bid.

- A buyer needs a book
  - There are three sellers, i=1,2,3
  - The buyer has a **reservation price** (won't pay any more than this)
  - w(i) is the wholesale price of seller i
  - the seller i submits price p(i) (sealed bid)
  - sale goes to the lowest bidder at this bid (if below the reservation price)
  - If bidder i gets to sell, then the profit is:

$$p(i) - w(i)$$

Auctions, cont'd

A word about currency:

- This is a global perspectives class, so the currency is Euro.
- Right now, the exchange rate is $1 for every €0.75 (or € 1 for every $1.33)

Auctions, cont'd

Auction outcome:

- Buyer reservation price is €80
- Seller costs:

w_1 = € 60 w_2 = € 60 w_3 = € 60

- Bids:

p(1) = € 69 p(2) = € 67 p(3) = € 75

Winner is Bidder 2 ?

Selling price is winner's bid of 67 ?

Profit to Bidder 2 is 7 ?

profit of buyer = 13

Auctions, cont'd

We just saw from above that the sellers all faced a tradeoff: What are the costs and benefits of submitting a low bid?

Auctions, cont'd

Takeaway from Experiment 1:

- There is a tradeoff when submitting a low bid.

- The good thing about a low bid: it increases the chance of winning.

- The bad thing about a low bid: you don't make as much money when you win.

Auctions, cont'd

Experiment 2: (Adding some competition)

Let's set up a situation where bidders know each others' costs:

Costs $w_1 = w_2 = w_3 = €\ 75$

(i) Sale price with three bidders?

very close to 75

(ii) Sale price with one bidder?

very close to 80

Auctions, cont'd

Takeaway from Experiment 2:

If bidders know each other's cost, are not working together, and have the same cost, then the selling price will usually be close to the cost. **Competition works!**

If there is one bidder, we have a monopoly situation and **the price will come out high**. The price will probably be pretty close to the buyer's reservation price.

Auctions, cont'd

Experiment 3: (adding collusion)

- Set up similar to Ex. 2 with three bidders.
- Are there three people in the class who are friends? (Or maybe would like to be friends....)
  - What would your bid be for selling your textbook?

Very close to 80.

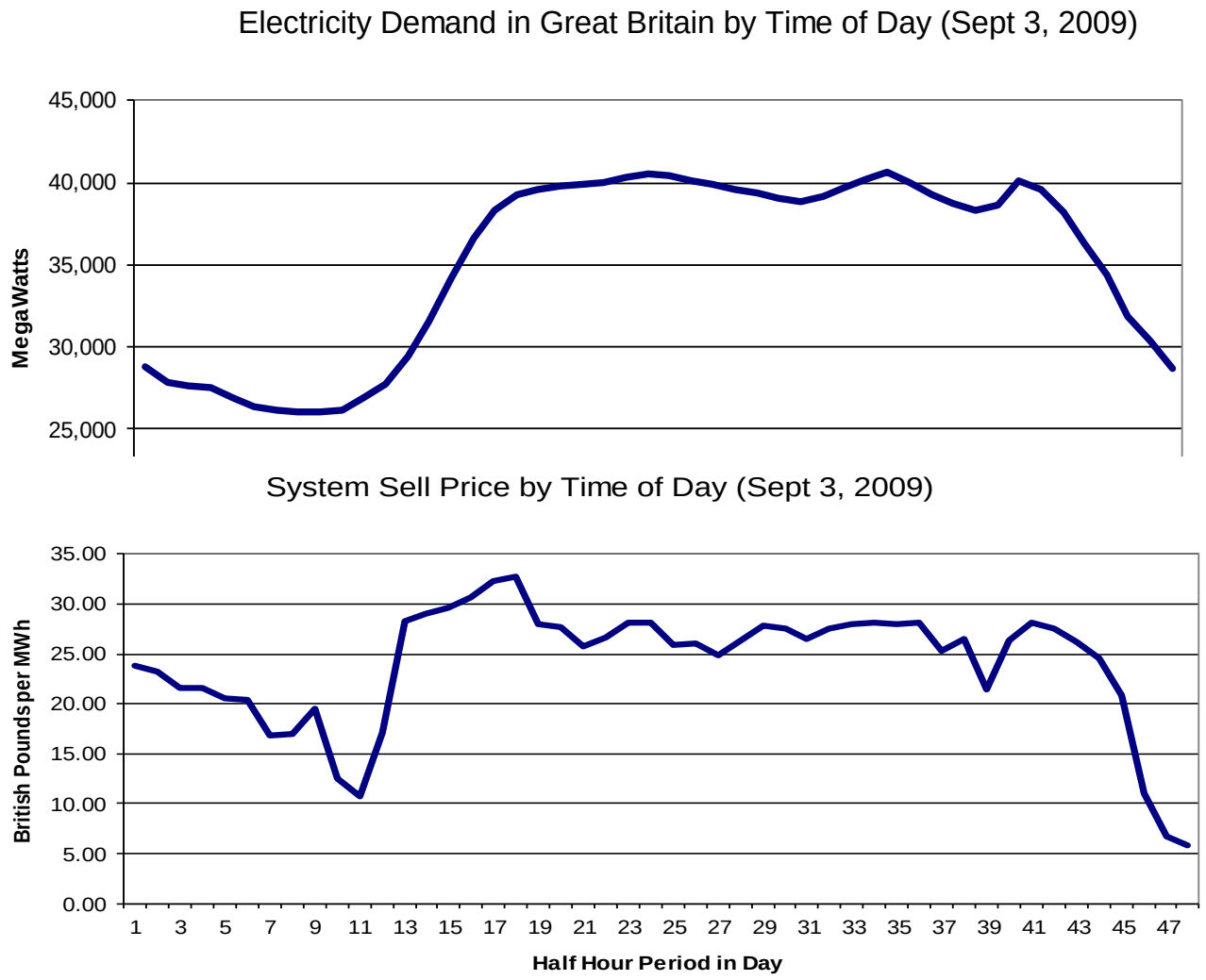
Auctions, cont'd

Takeaway from Experiment 3:

Even with multiple firms we can get something close to monopoly prices if firms collude.

Collusion to fix prices is illegal in the US and in many other countries!

Electricity Auction in the UK



Electricity Auction, cont'd

There is an "Independent System Operator":

1. Receives offers to sell from Suppliers
   - "I will sell 10 Megawatt hours for £25 from 11:00-11:30…"
2. Sees forecasts of demand
3. Picks Price, Quantity and Who gets to sell
   - ("P, Q, and Who")

Rules: Sort bids by price, set price equal to last needed to meet the demand. This is a **uniform price auction:**

- Contrast with "pay as bid auction"

Electricity Auction, cont'd

Seller Name	Sell Price for 1 MWh (£ per MWh)
S1	30
S2	5
S3	50
S4	10
S5	20
S6	25
S7	5
S8	10
S9	50
S10	15

- Buyer submits quantity demanded:

  $Q^d = 6$ MWh

- Sellers submit bids

Electricity Auction, cont'd

- First task of ISO (Independent System Operator): Sort Bids (lowest to highest)

Electricity Auction, cont'd

Seller Name	Sell Price for 1 MWh (£ per MWh)
S1	30
S2	5
S3	50
S4	10
S5	20
S6	25
S7	5
S8	10
S9	50
S10	15

Rank	Seller Name	Sell Price	In?
1	S2	5	x
2	S7	5	x
3	S4	10	x
4	S8	10	x
5	S10	15	x
6	S5	20	x
7	S6	25	
8	S1	30	
9	S3	50	
10	S9	50	

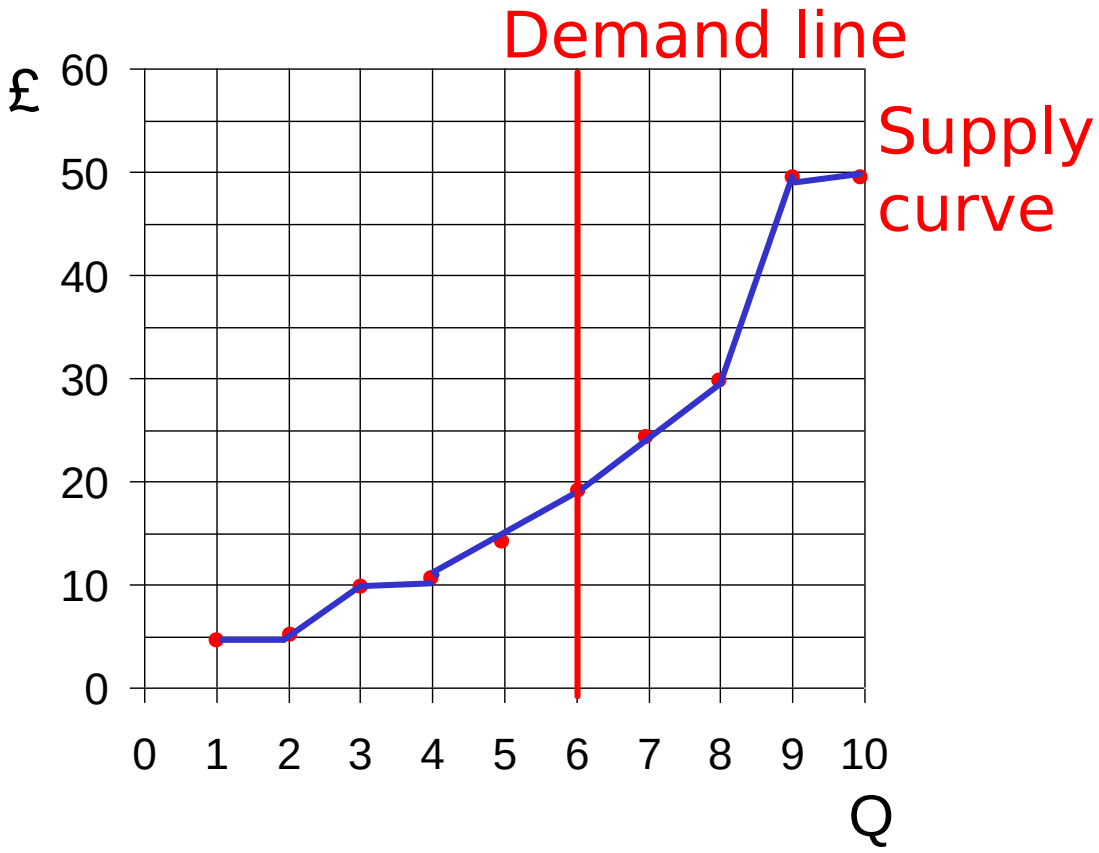
Electricity Auction, cont'd

Seller Name	Sell Price for 1 MWh (£ per MWh)
S1	30
S2	5
S3	50
S4	10
S5	20
S6	25
S7	5
S8	10
S9	50
S10	15

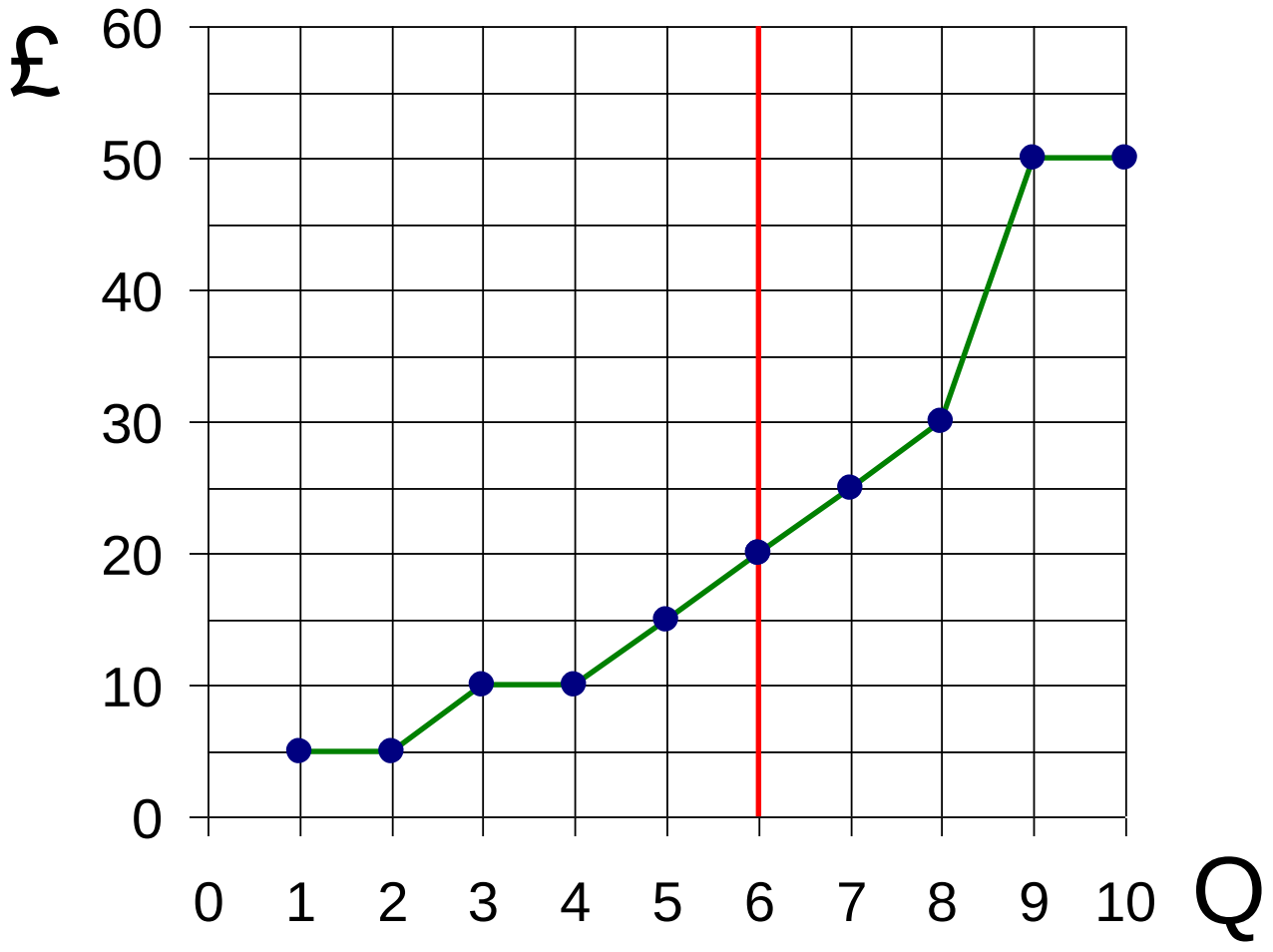
Rank	Seller Name	Sell Price	In?
1	S2	5	X
2	S7	5	X
3	S4	10	X
4	S8	10	X
5	S10	15	X
6	S5	20	X
7	S6	25	
8	S1	30	
9	S3	50	
10	S9	50	

Electricity Auction, cont'd

Rank	Seller Name	Sell Price	In?
1	S2	5	X
2	S7	5	X
3	S4	10	X
4	S8	10	X
5	S10	15	X
6	S5	20	X
7	S6	25	
8	S1	30	
9	S3	50	
10	S9	50	



Electricity Auction, cont'd



Last thing: HW1 data exercise

- You can download the data file and instructions from Aplia directly…
- or from my website (if you don't have an account yet)