lmarron@wisc.edu

Module 1: Core Principles

What is Economics?

- study of how people allocate scarce resources
- study of how people respond to incentives

Principle 1: Cost-Benefit

- costs & benefits are the main incentives that shape peoples' decisions

cost: how much does a good or service cost

benefit: how much utility, or benefit, do you gain from a good or service
↳ measured in utils or $

(ex) A student ticket to the Wisconsin football game costs $75. I value going to the game at $60.

Benefit - cost = 75 - 60 = 15

Since 15 > 0, I buy the ticket (benefit > cost)

- we call this difference the **economic surplus** ($15 in this ex)

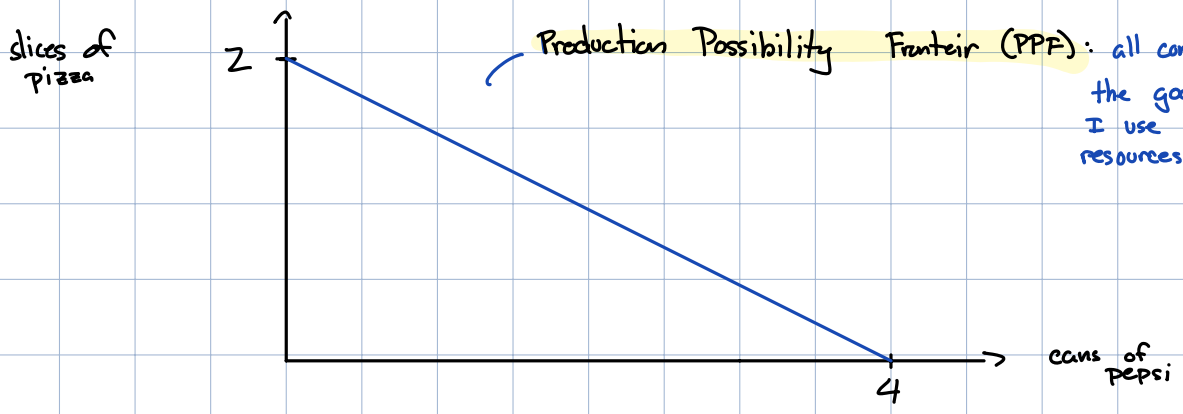
Principle 2: Opportunity Cost

- the opportunity cost of something is the difference between that good & the next best alternative
- shows the trade-off people make when making decisions

(ex) I have $12. A slice of pizza costs $6 & a Pepsi cost $3.

↳ the OC (opportunity cost) of buying a slice of pizza is 2 Pepsis.

we can show the tradeoffs using the following graph:



Production Possibility Frontier (PPF): all combinations of the goods in which I use all my resources (in this case, $112).

Principle 3: Marginal Principle

- an application of the cost-benefit Principle
- When deciding how much of a good or service to buy, it is easiest to look at incremental changes. Start with one, and keep adding if the benefit of the additional (we normally say marginal) good is greater than the cost.

ex) How many workers should I hire given the following table?

workers	profit	cost	surplus	MC	MB	
1	500	200	300	200	500	
2	900 (↓400)	400 (↓200)	500	200	400	
3	1200 (↓300)	600 (↓200)	600	200	300	
4	1400 (↓200)	800 (↓200)	600	200	200	MB = MC ... add no more!
5	1500 (↓100)	1000 (↓200)	500	200	100	

to solve, we found the marginal cost (MC), which is the additional cost of hiring another worker & the marginal benefit (MB) each worker provides

Principle 4: Interdependence

- Your best choice depends on your other choices, the choices of others, changes in other markets, and expectations on the future

(ex) The utility I get from going to a party depends on how many of your friends are going

MATH REVIEW

- we will be using linear equations a lot in this class. they take the form:

$$y = mx + b$$

m - slope, calculated by $\frac{\text{rise}}{\text{run}}$

b - constant term, or y-intercept