# Preferences

Econ 50 | Lecture 4 | January 14, 2013

# Lecture

- Unit Overview: Preferences and Choice
- Rational Preference Framework
- Beyond Rational: A Peek

# Group Work

- Deeper understanding of preference framework
- Drawing indifference curves for different kinds of preferences
- Understanding the marginal rate of substitution

# Unit Goal

$$q_x^D(P_x, P_y, I)$$

$$q_y^D(P_x, P_y, I)$$

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**exogenous variables**

**price of good X**
**price of good Y**
**income**

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**price of good Y**
**income**

$$q_x^D(P_x, P_y, I)$$

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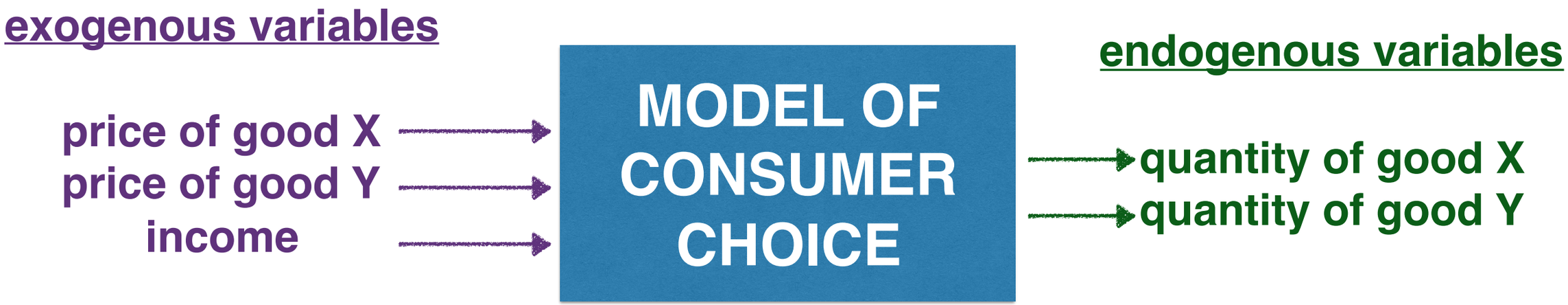
**endogenous variables**

**quantity of good X**
**quantity of good Y**

# Unit Approach



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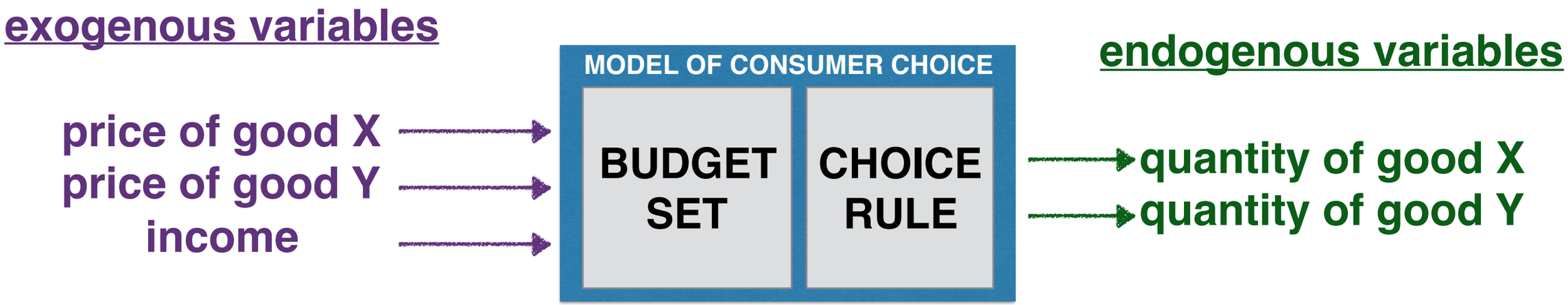

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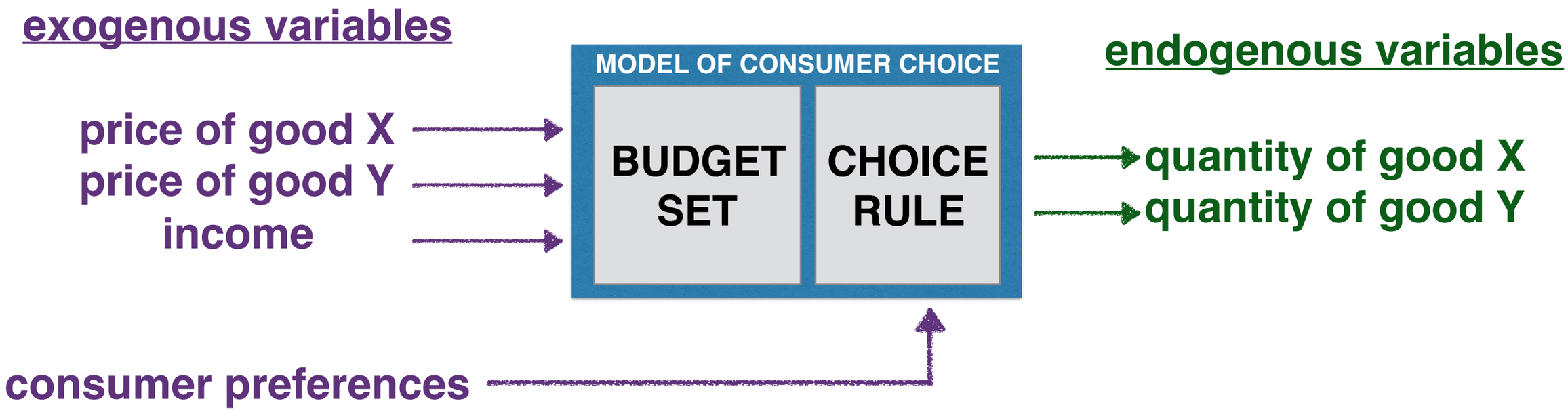

# Unit Overview

- **Preferences (Lectures 4 & 5, Homework 2)**
  *How do consumers rank alternatives?*
  Readings: B&B Ch. 3; Varian Ch. 3 & 4

- **Choice (Lectures 6 & 7, Homework 3)**
  *How do consumers choose to allocate their income among goods?*
  *What do their observed choices "reveal" about their preferences?*
  Readings: B&B Chapter 4; Varian Ch. 2, 5, 7

# The Economic Model of Preferences


REFRIGERATE AFTER OPENING
365 ORGANIC EVERYDAY VALUE
Organic
Pasta Sauce
Classic
NET WT 25 OZ (1 LB 9 OZ/709g)
USDA ORGANIC
365 ORGANIC EVERYDAY VALUE
Organic
Pasta Sauce
Classic
NET WT 25 OZ (1 LB 9 OZ/709g)
USDA ORGANIC
10C 06/20/14
9948240649
365 ORGANIC
ORGANIC PASTA SAUCE
1 @ 25 OZ
10.76¢ PER OZ
UNF 98875 12/CS
$2.69
EVERYDAY
Deal


ORIGINAL FAMILY RECIPE
TIMPONE'S
MOM'S
ORGANIC
PASTA
SAUCE
TOMATO & BASIL
TRADITIONAL
NET WT 24 OZ (680g)
TIMPONE'S
MOM'S
ORGANIC
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SAUCE
SICILIAN
ROASTED PEPPER
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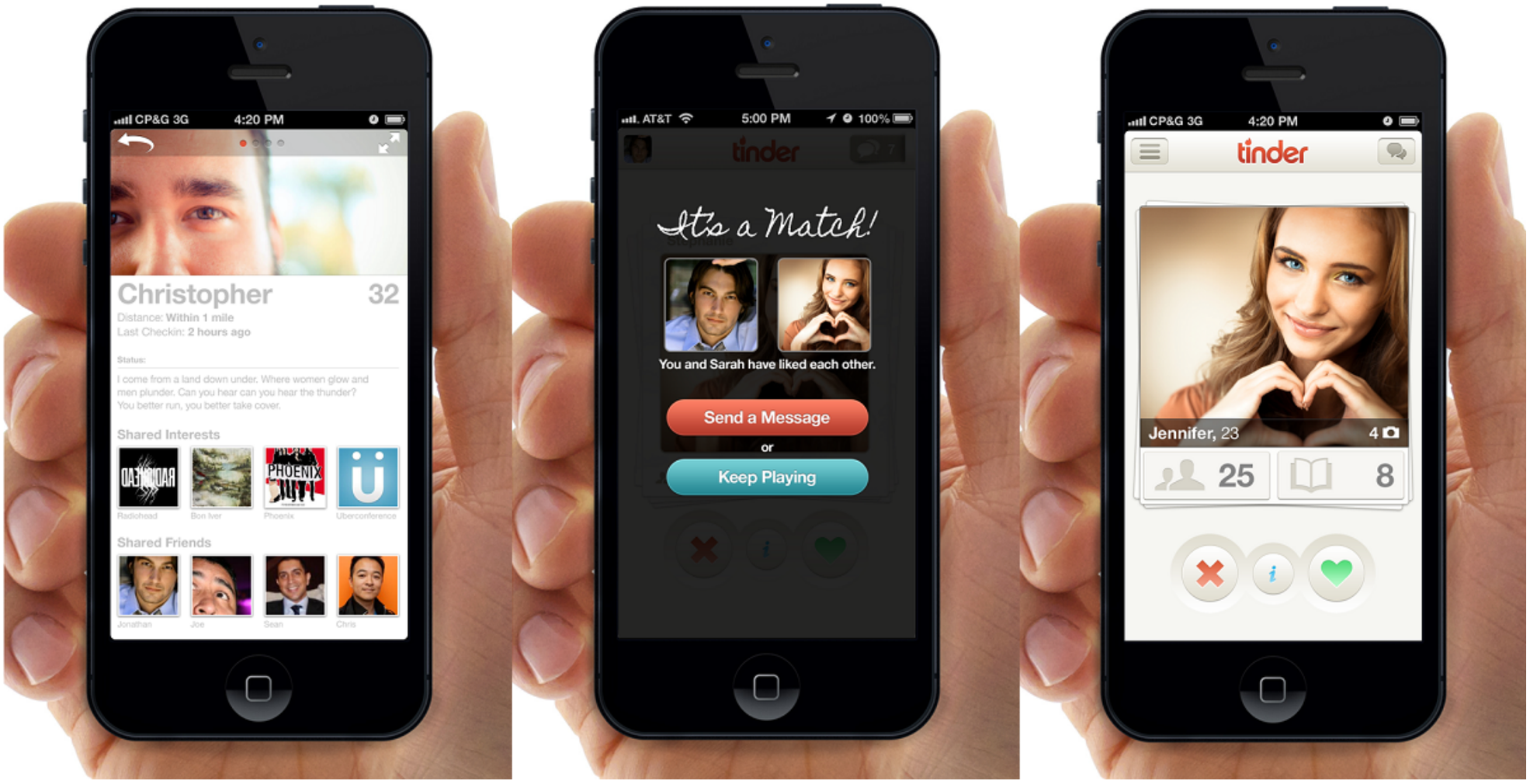
10A
MOMS
ORG SICILIAN ROASTED
PEPPER PASTA SAUCE
1 @ 24 OZ
33.29¢ PER OZ
UNF 62862 6/CS
$7.99
SALE
SALE ENDS: 01/27/15
26.62¢ PER OZ
$6.39
YOU SAVE:$1.60


CP&G 3G
4:20 PM
Christopher
32
Distance: Within 1 mile
Last Checkin: 2 hours ago
Status:
I come from a land down under. Where women glow and men plunder. Can you hear can you hear the thunder? You better run, you better take cover.
Shared Interests
Radiohead
Bon Iver
Phoenix
Uberconference
Shared Friends
Jonathan
Joe
Sean
Chris
AT&T
5:00 PM
100%
tinder
It's a Match!
You and Sarah have liked each other.
Send a Message
or
Keep Playing
CP&G 3G
4:20 PM
tinder
Jennifer, 23
4
25
8

# Preferences: Vocabulary

- A consumer is evaluating **bundles** or **baskets** of goods
- For any two bundles, **Bundle A** and **Bundle B**, we want to know which the consumer **prefers**.

# Preferences: Notation

Given a choice between bundle $A$ and bundle $B$, we say that:

| | | |
|---|---|---|
| $A \succ B$ | $A$ is **strictly preferred** to $B$ | The consumer likes $A$ **more than** $B$. |
| $A \succeq B$ | $A$ is **weakly preferred** to $B$ | The consumer likes $A$ **at least as much as** $B$. |
| $A \sim B$ | **Indifferent** between $A$ and $B$ | The consumer likes $A$ and $B$ **the same amount**. |
| $A \preceq B$ | $A$ is **weakly dispreferred** to $B$ | The consumer likes $A$ **at most as much as** $B$. |
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# Fundamental Assumptions

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|---|---|---|
| Preferences are **complete.** | Any two bundles can be compared. | For any $A$ and $B$, either $A \succeq B$ or $B \succeq A$. |
| Preferences are **transitive.** | If you like $A$ at least as much as $B$, and you like $B$ at least as much as $C$, then you like $A$ at least as much as $C$. | If $A \succeq B$ and $B \succeq C$, then $A \succeq C$. |

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Together, these assumptions mean that consumers can **rank all possible consumption bundles** in a coherent way.

# Special Case: Bundles of Quantities

# Potential Assumptions about Preferences Over Quantities

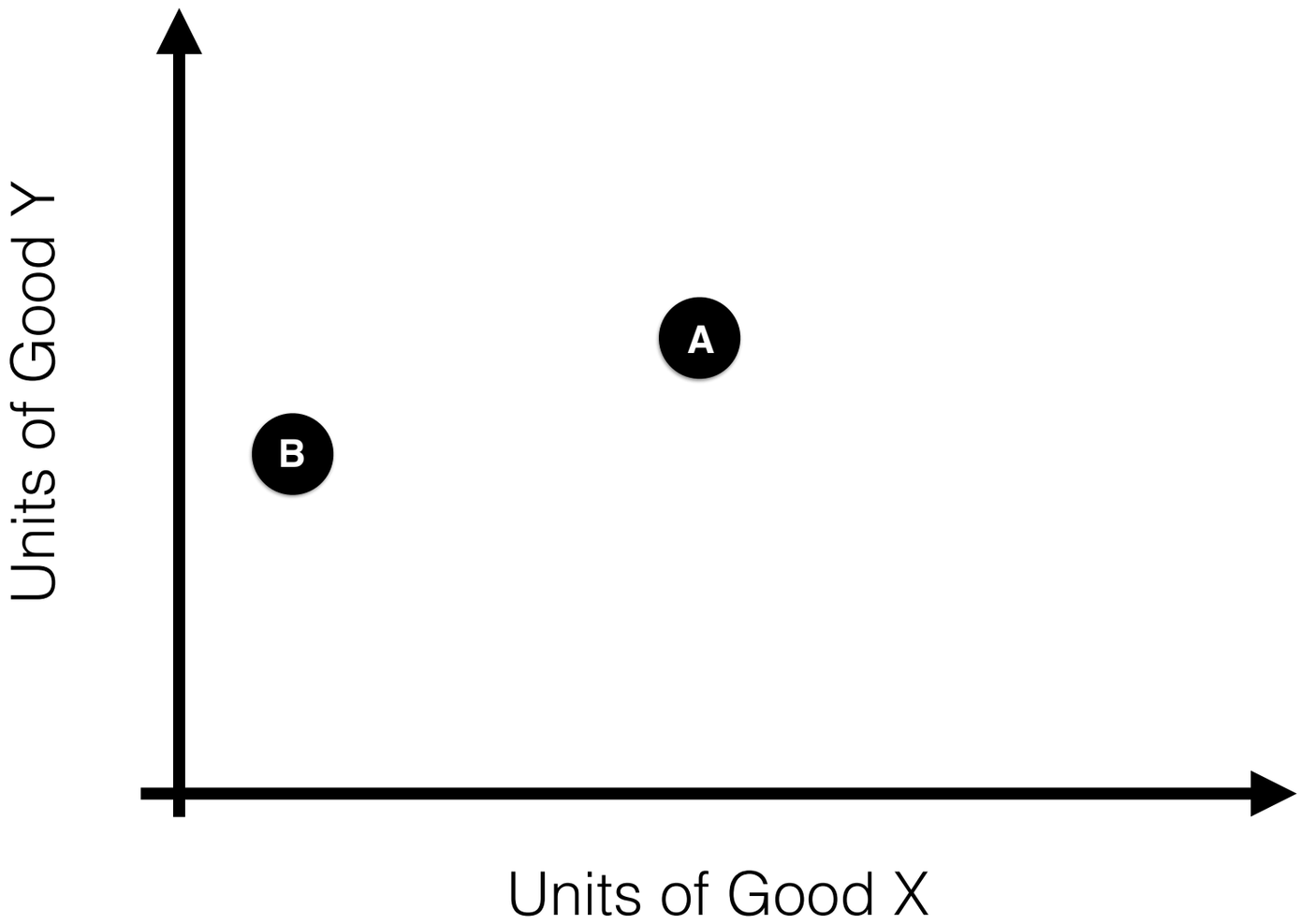
**"More is better" (Monotonicity)**

**A** is preferred to **B** if **A** has more of all goods than **B**

**"Variety is better" (Convexity)**

If a consumer is indifferent between **A** and **B**, and **C** is a **convex combination** of **A** and **B**, the consumer prefers **C** to both **A** and **B**.

# Monotonicity Assumption



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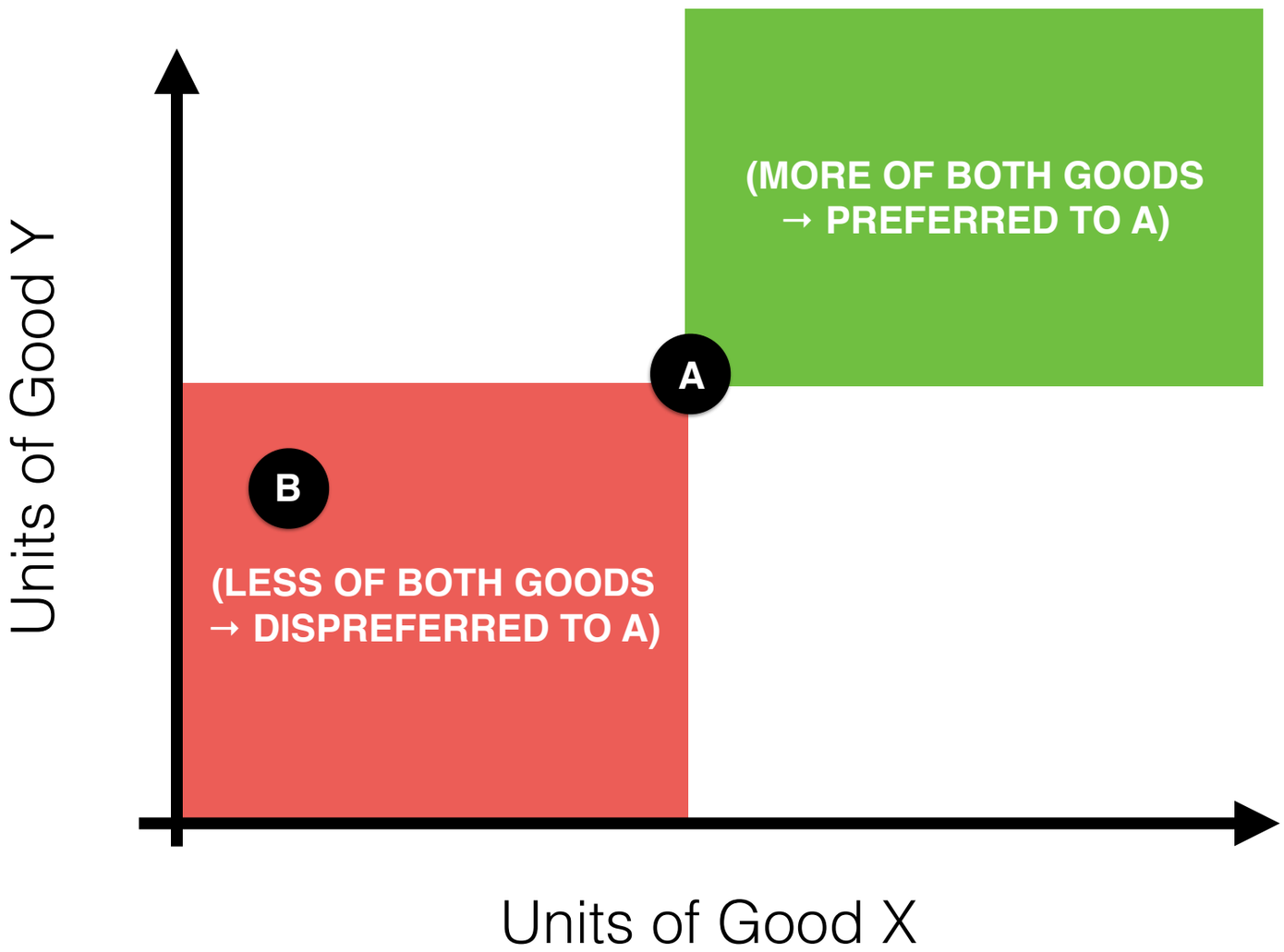
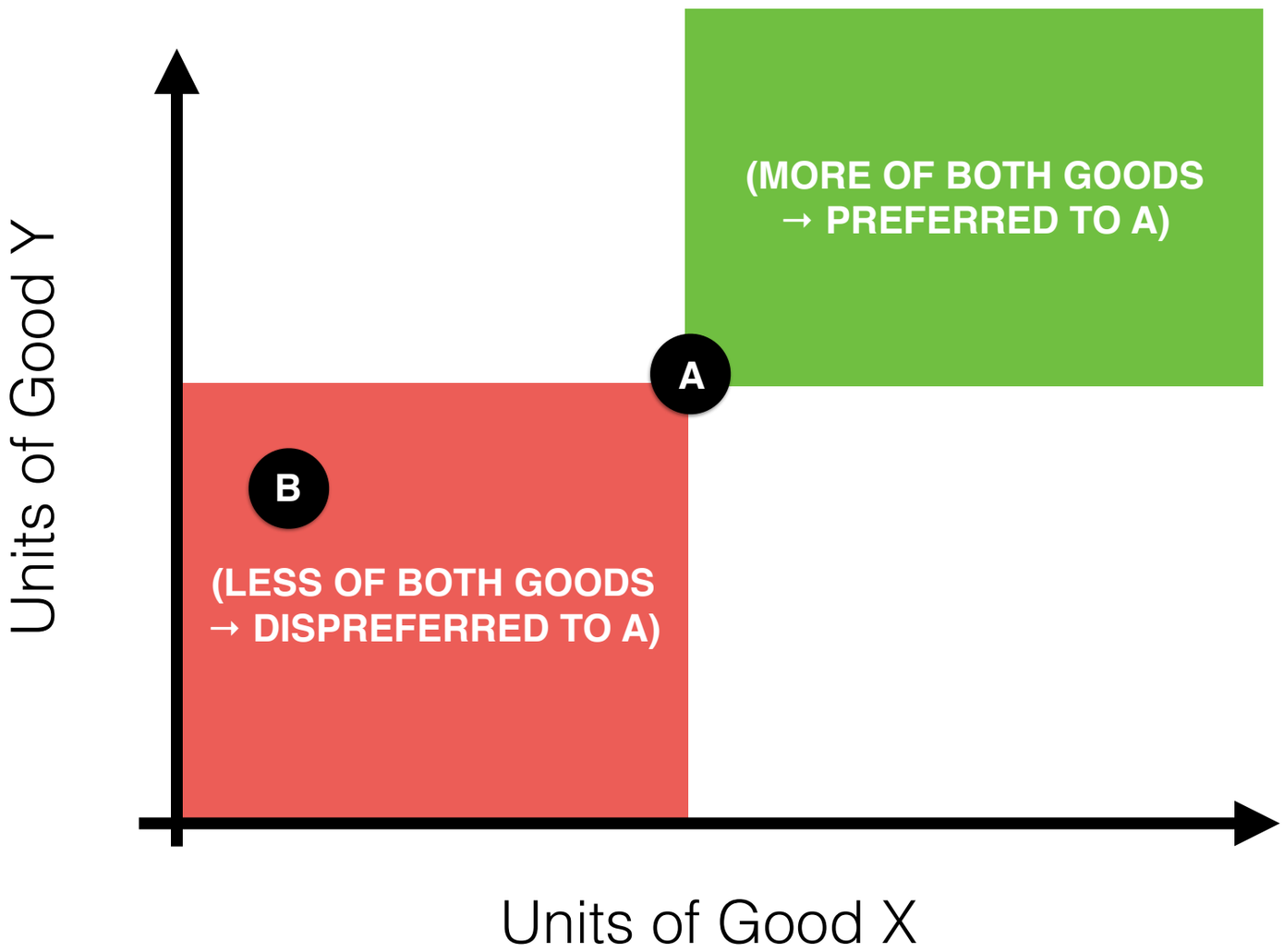
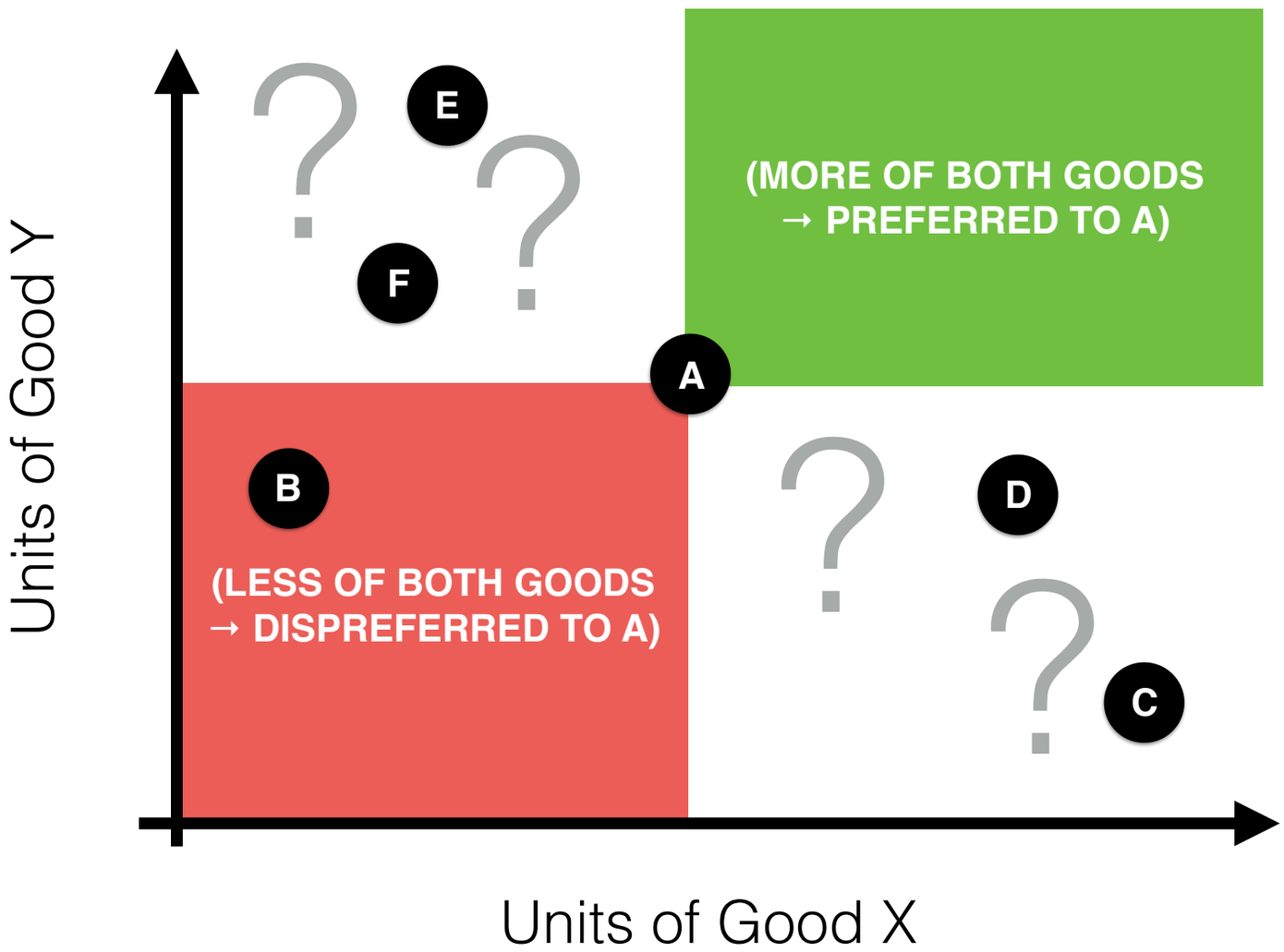


How do we compare bundles if each has more of one good than the other?


(MORE OF BOTH GOODS
→ PREFERRED TO A)
A
B
(LESS OF BOTH GOODS
→ DISPREFERRED TO A)
Units of Good Y
Units of Good X


Units of Good Y
Units of Good X
E
F
A
B
D
C
(MORE OF BOTH GOODS
→ PREFERRED TO A)
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# Indifference curves

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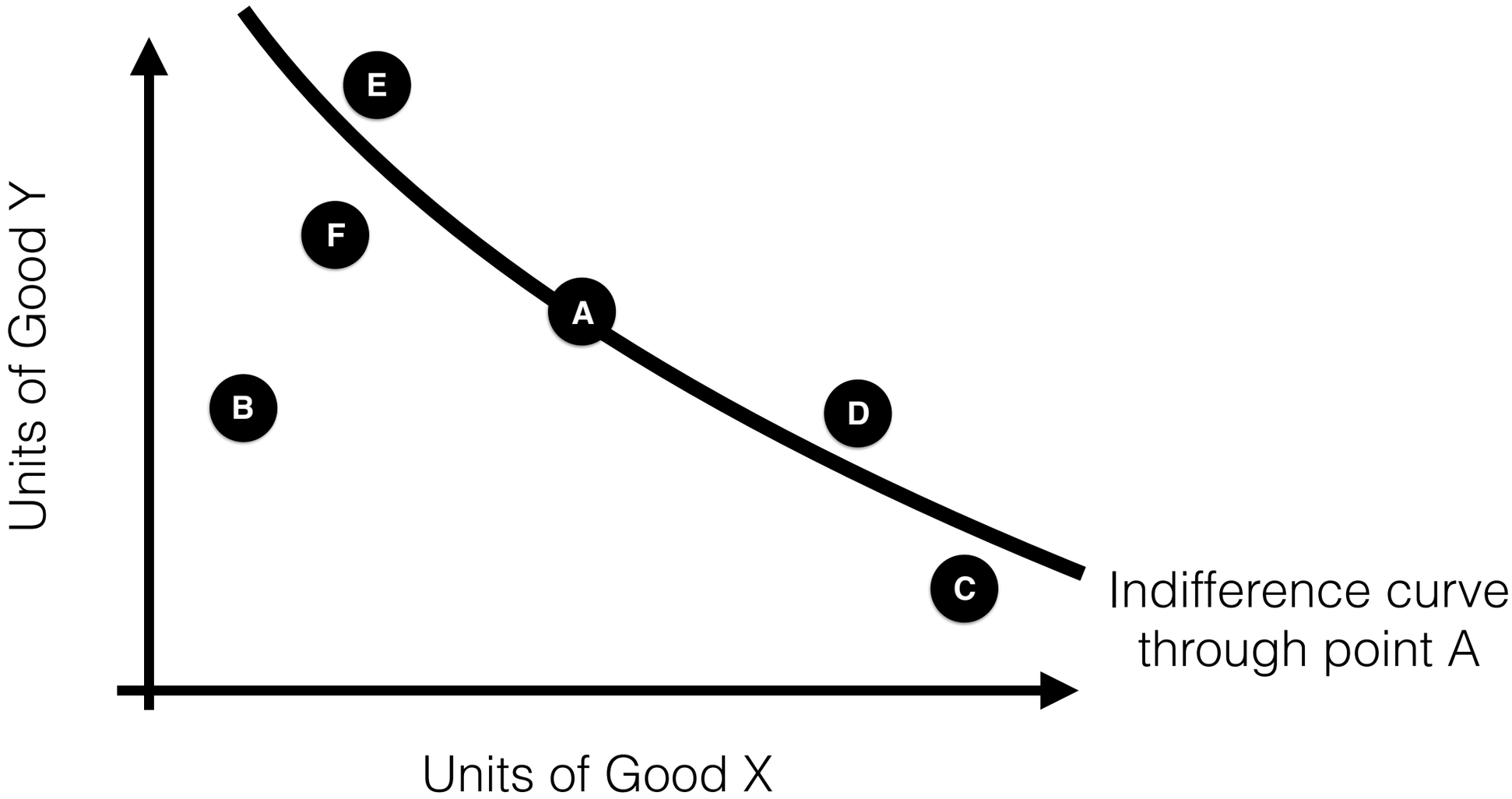

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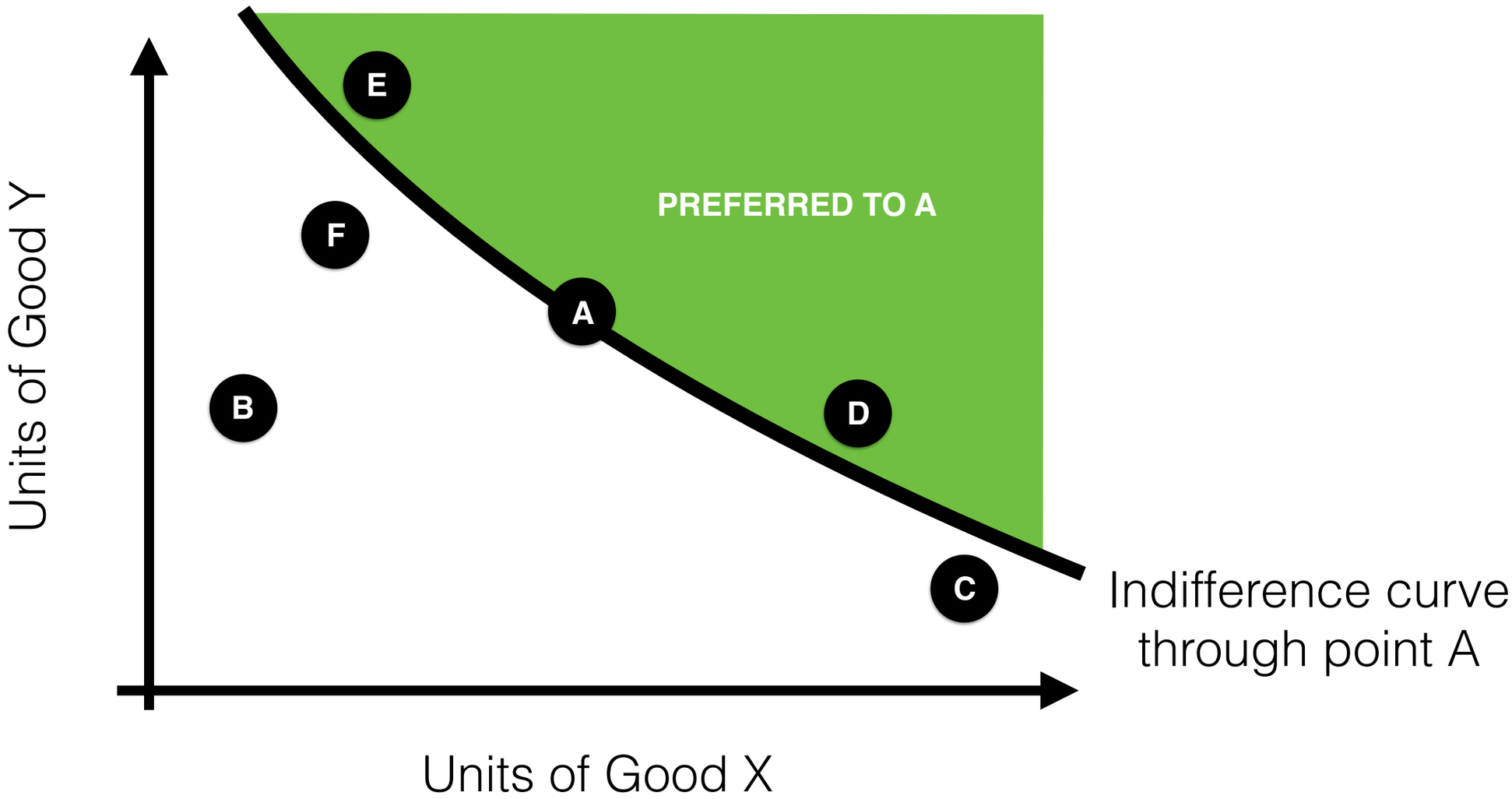

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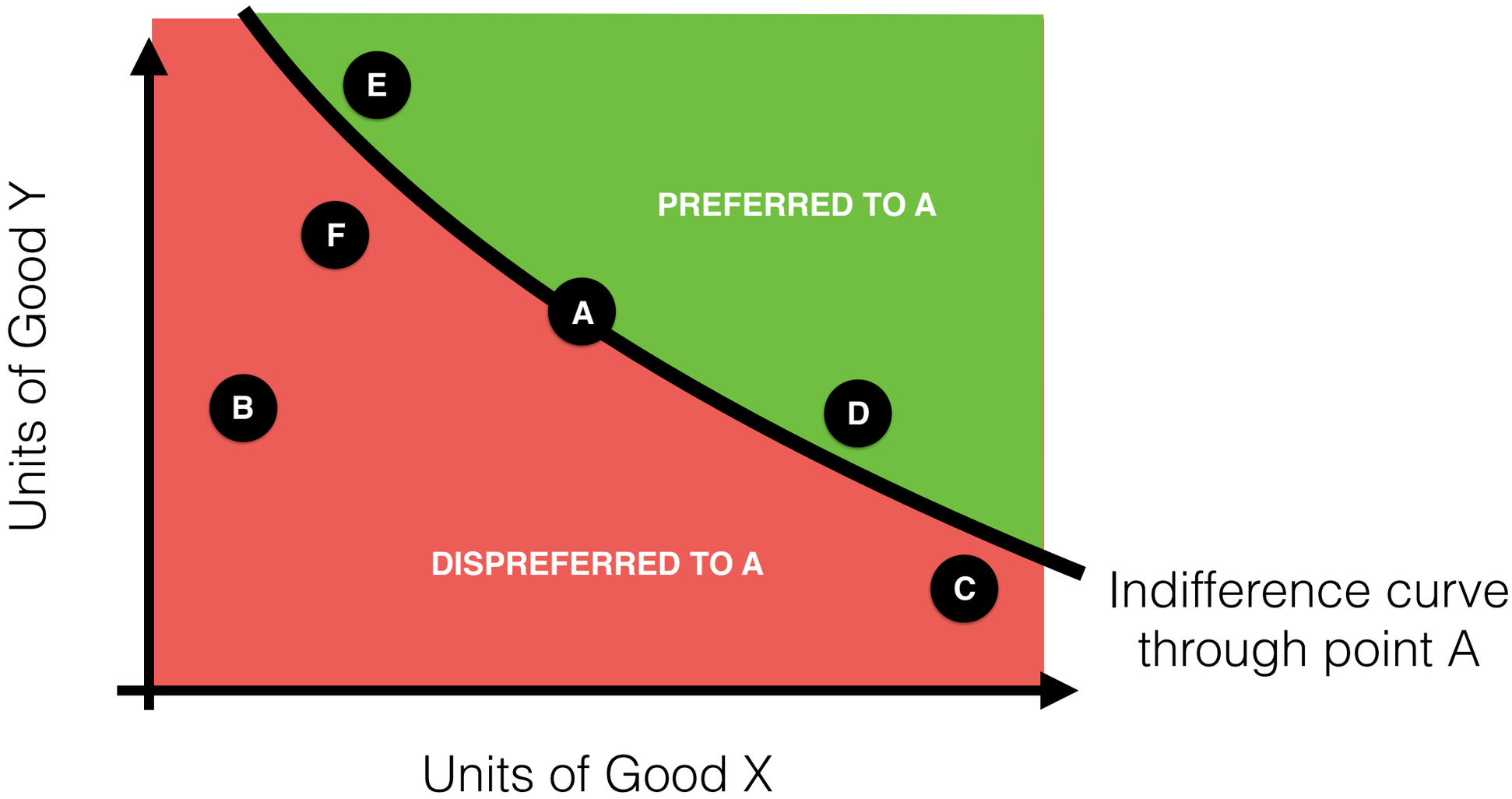


An indifference curve
through a point
**partitions** the entire **choice set**

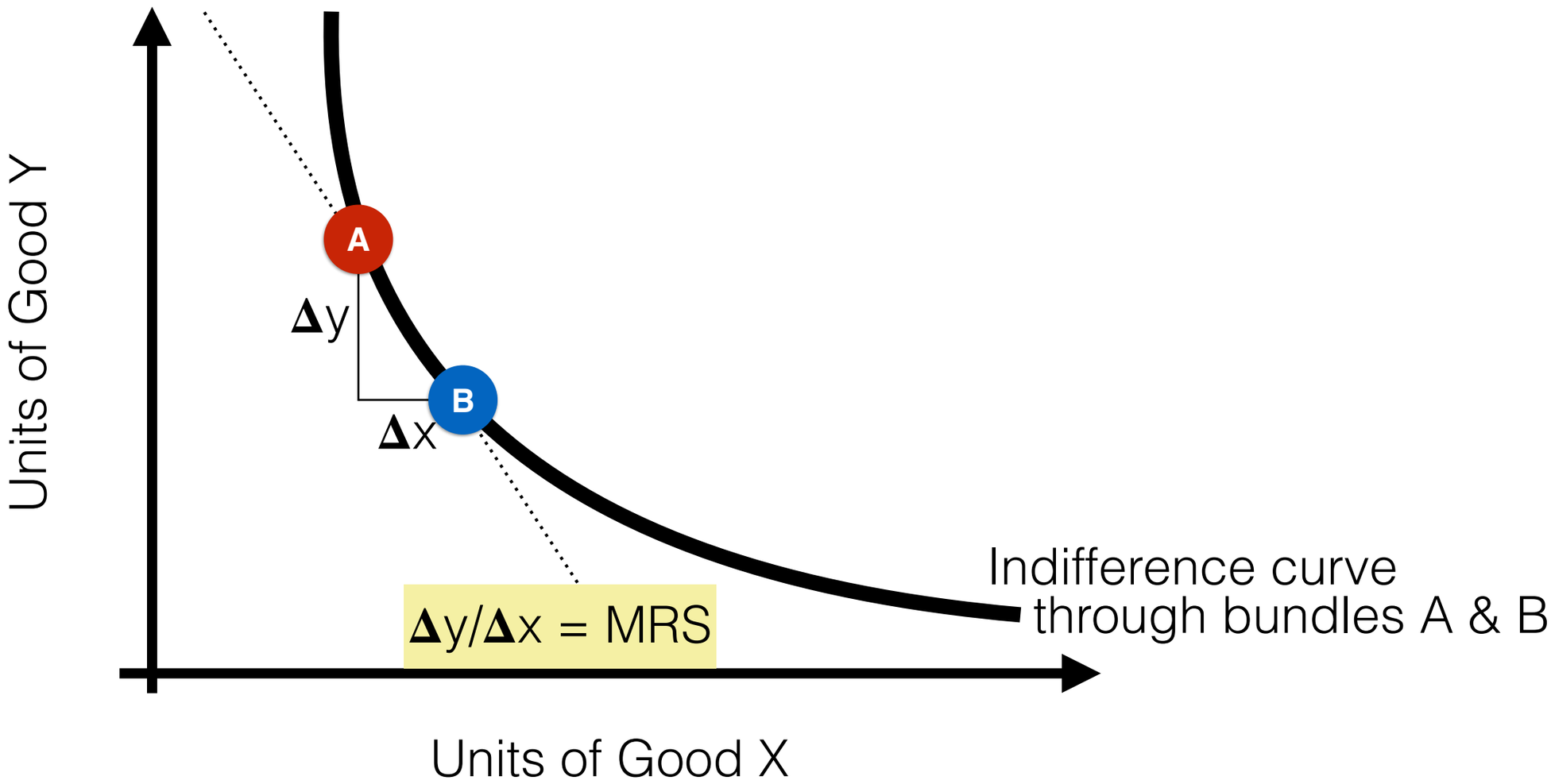
**Complete preferences** mean every possible bundle has an indifference curve passing through it.

The **monotonicity** assumption (more of each good is better) implies that the **slope** of indifference curves is **negative**.

# Marginal Rate of Substitution

- **Intuitively**: rate at which a consumer is willing to give up good Y to get an additional unit of good X.
- **Visually**: absolute value of the slope of an indifference curve
- **Mathematically**: (next time)

# Marginal Rate of Substitution



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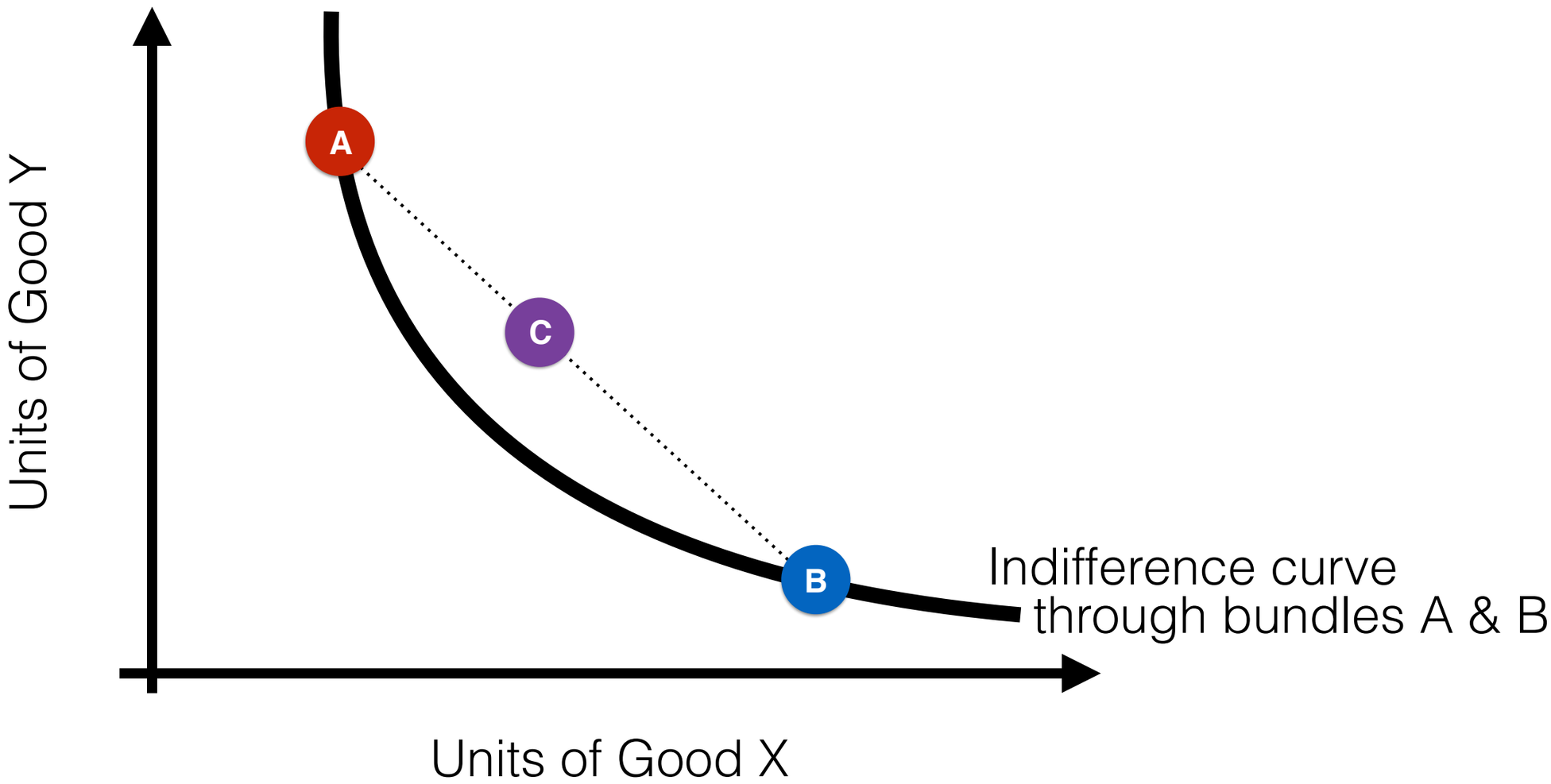


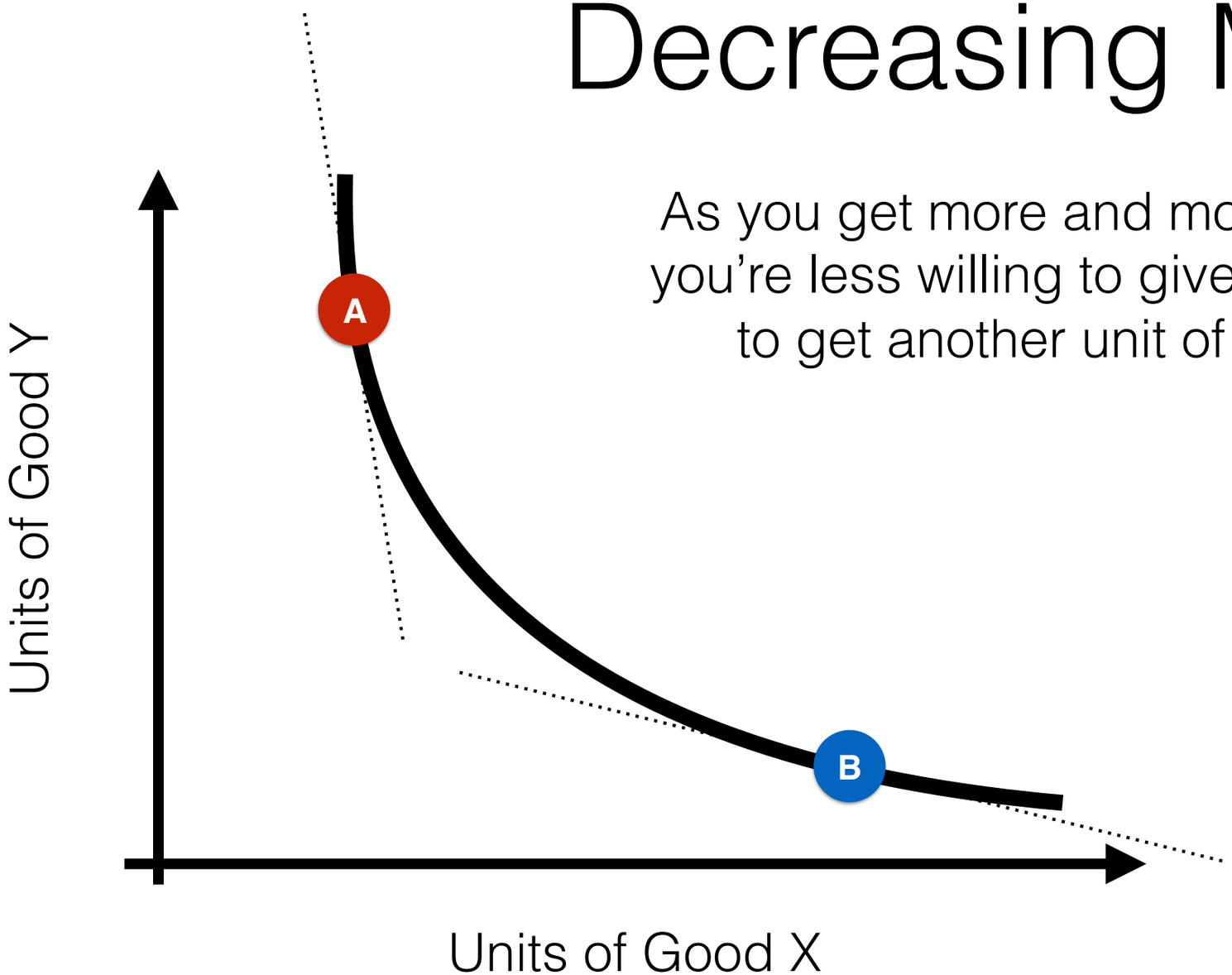
The **convexity** assumption implies:

(1) indifference curves are **bowed in** toward the origin

(2) MRS is **decreasing**

# Decreasing MRS

As you get more and more X,
you're less willing to give up Y
to get another unit of X



# Special Cases

- **Perfect complements**
  always consume things in a specific ratio
  having more of either X or Y doesn't make you happier

- **Perfect substitutes**
  always willing to trade one good for another in a specific ratio;
  constant MRS


# Bounded Rationality

http://www.ted.com/talks/laurie_santos?language=en

You have been given $1000. You now need to choose either:

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Take a Risk
Heads = You get $1000 more
Tails = You get $0 more

Play it Safe
You just get $500 more
with certainty

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You have been given $2000. You now need to choose either:

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Take a Risk
Heads = You get $1000 more
Tails = You get $0 more

Play it Safe
You just get $500 more
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You have been given $2000. You now need to choose either:

Take a Risk
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Tails = You lose $0

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