



# The Ultimate Unit 1 Cheat Sheet

Everything you need to know about the PPC, economics systems, comparative advantage, and marginal analysis

## Scarcity

**Resource:** an input used to create goods and services

**Scarcity:** the fundamental problem of economics where there are not enough resources to fulfill all wants and needs.

- EX: Governments have limited revenue to fund their projects

**Macroeconomics:** a branch of economics that studies the behavior of the economy as a whole

**Factors of Production:** The resources used to produce all goods and services.

- Land: all natural resources
- Labor: the human effort that goes into production
- Capital: man-made resources used to create goods and services. Includes **Physical Capital** (tools, machines, factories) and **Human Capital** (the skills, education, health)
- Entrepreneurship: the act of bringing together the other factors of production to create a good or service



## Resource Allocation & Economic Systems

### 3 Economic Questions:

Scarcity forces every society to answer these 3 questions. Different answers lead to different economic systems.

1. **What to produce?** (Which goods and services are most needed/wanted with our limited resources?)
2. **How to produce?** (What combination of labor, land, and capital will be used? Is it human-intensive or automated?)
3. **For whom to produce?** (Who gets to consume the final products? Is it based on need, wealth, or first-come-first-served?)

**Market Economy:** economic system characterized by the private ownership of resources and the use of markets and prices to coordinate economic activity

**Command Economy:** an economic system where the government owns most property resources and makes nearly all significant economic decisions.

**Mixed Economy:** a system that combines elements of both the market system and the command system.

- most modern economies are mixed systems

**Price System:** a component of the market system where prices act as signals to both buyers and sellers.

- prices help to ration goods to those who are most willing and able to buy
- high prices signal producers to enter the market, while low prices signal them to leave.

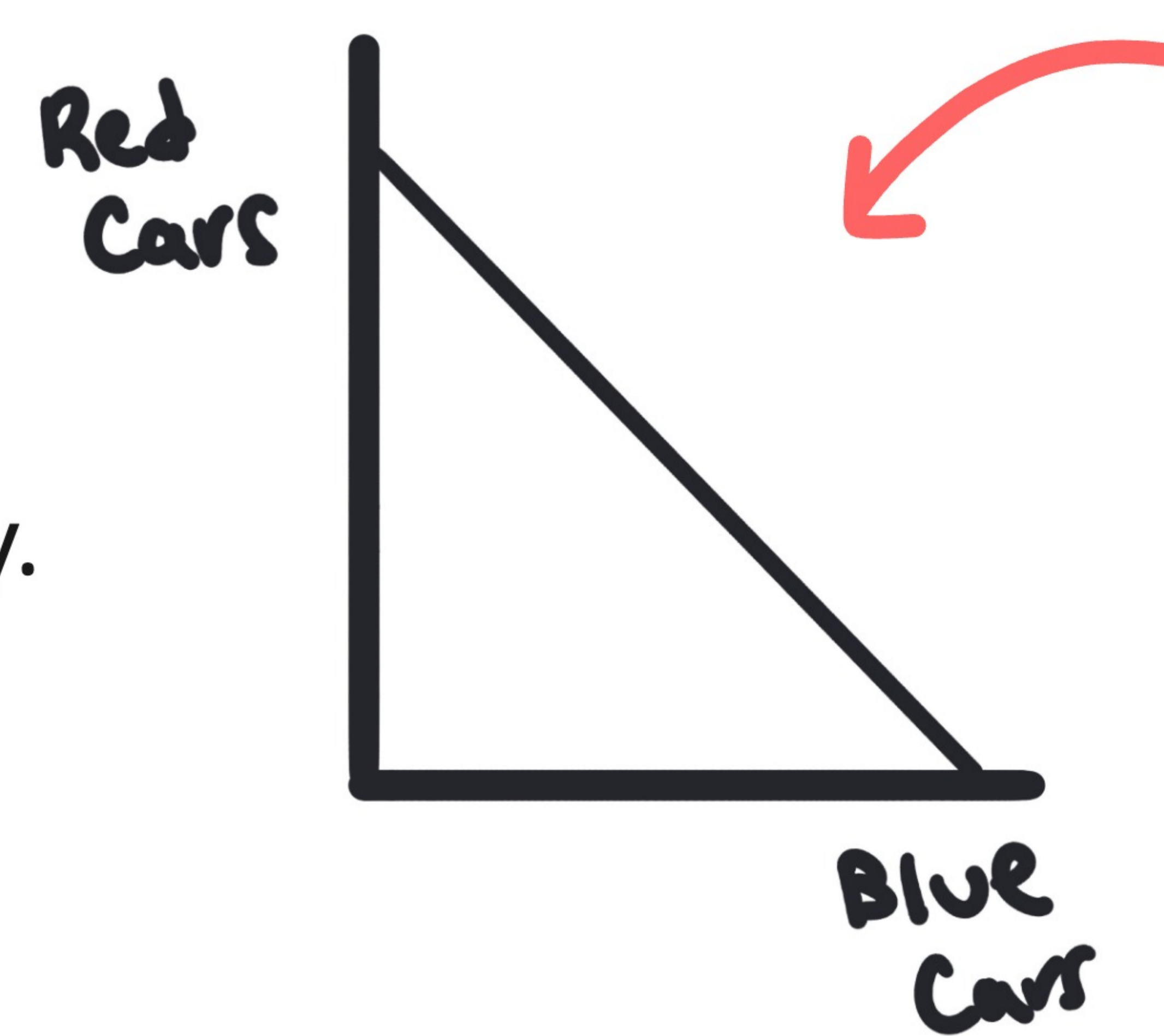
## Opportunity Cost & PPC

**Trade-Off:** giving up one thing to get another due to scarcity.

**Opportunity Cost:** the value of the next best alternative given up when making a choice.

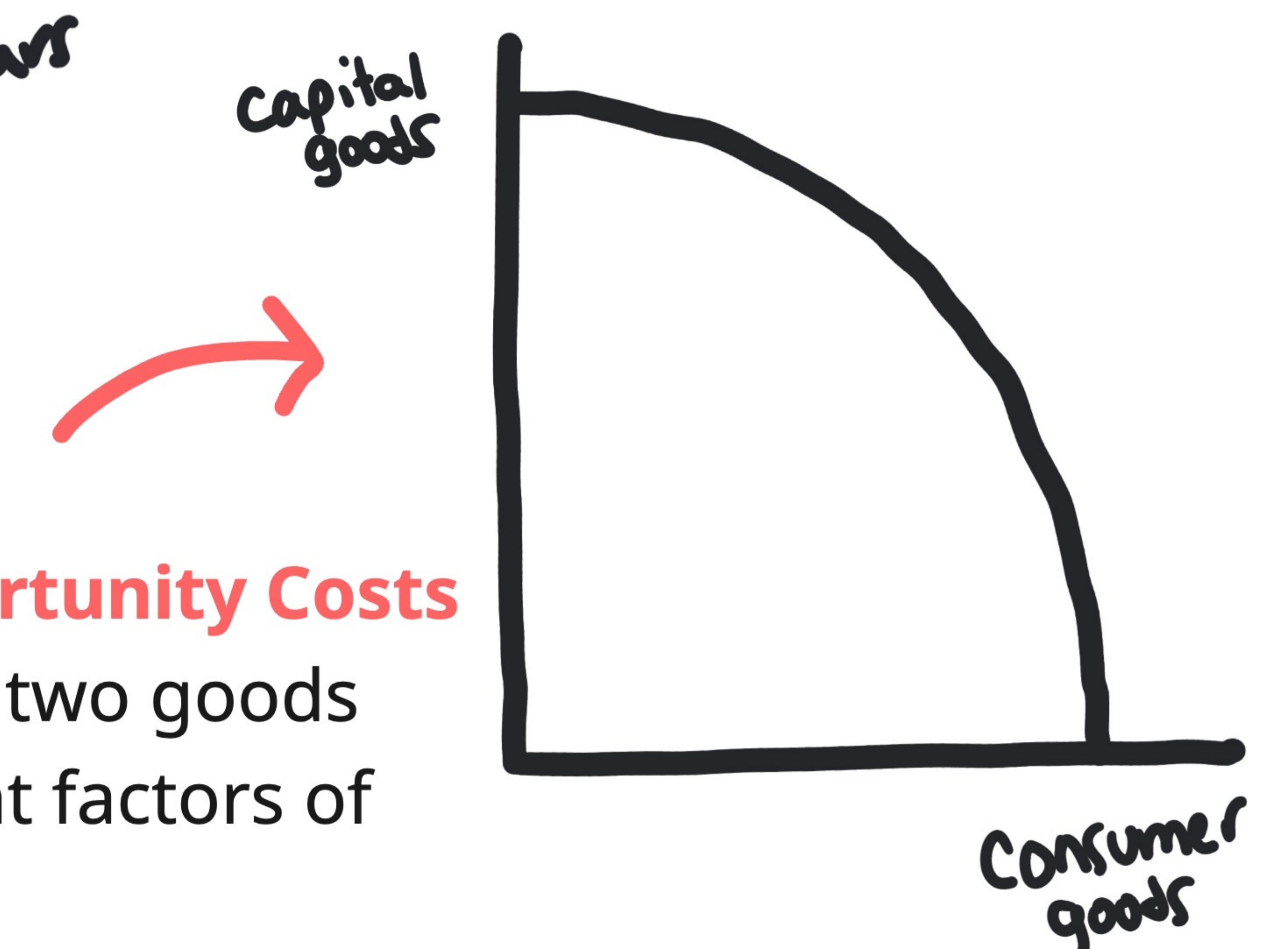
- Any decision has many trade-offs, but only ONE opportunity cost

**Production Possibilities Curve (PPC or PPF):** a graph showing different combinations of two goods that can be produced using all resources efficiently.



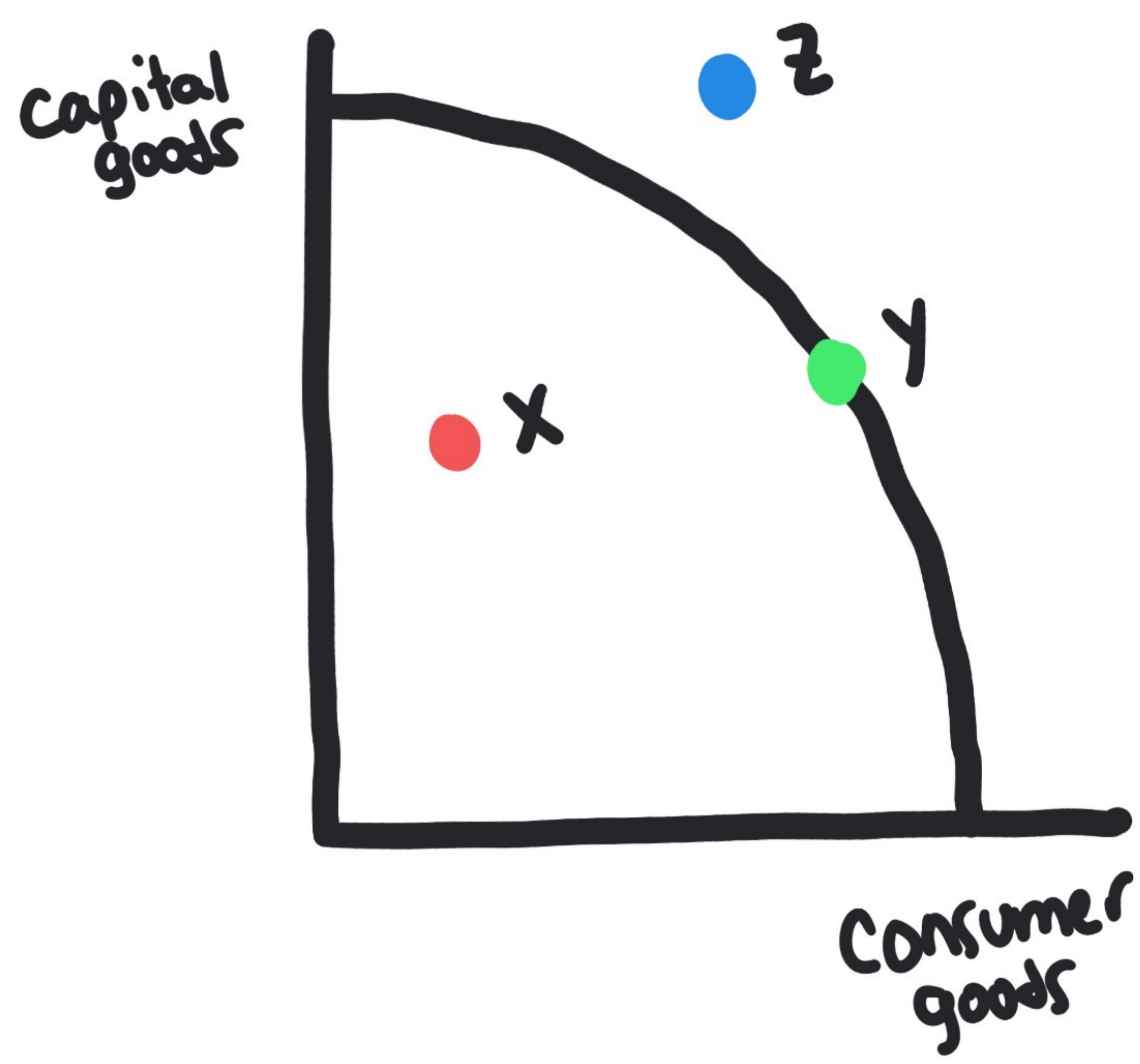
### Constant Opportunity Costs

- occurs when two goods have similar factors of production



### Increasing Opportunity Costs

- occurs when two goods have different factors of production



**Underutilization:** a situation where an economy is not using all of its resources efficiently, producing less than its maximum potential output.



**Productive Efficiency:** a situation where an economy is using all of its resources efficiently to produce at its potential output



**Unattainable Point:** a combination of goods that cannot be produced with the current resources and technology available to an economy.



# Comparative Advantage

**Absolute Advantage:** the ability to produce more of a good than another producer, given the same resources.

**Comparative Advantage:** the ability to produce a good at a lower opportunity cost than another producer.

**Terms of Trade:** the rate at which one good can be exchanged for another in trade; must lie between both parties' opportunity costs to be mutually beneficial.

Trading based on comparative advantage allows countries to consume outside their PPC

In this case, the USA has the absolute advantage in both goods, but only has the comparative advantage in the production of cars.

**Rule:** a country can only have the comparative advantage in one good, not both!

**Output Questions**  
amount of output that can be produced with the same resources.

$$O.C. = \frac{\text{Other}}{\text{Itself}}$$

**Input Questions**  
amount of resources (inputs) needed to produce each good.

$$O.C. = \frac{\text{Itself}}{\text{Other}}$$

	CARS	PHONES
USA	400	600
CANADA	200	400

# Marginal Analysis & Consumer Choice

**Marginal Benefit (MB):** The additional satisfaction or revenue gained from consuming or producing one more unit of a good.

**Marginal Cost (MC):** The additional expense or effort required to produce or consume one more unit.

**Marginal Analysis:** the process of comparing the additional benefits of an activity to the additional costs incurred by that same activity.

- General Rule: proceed with a choice if  $MB > MC$

**The Law of Diminishing Marginal Returns:** as you consume more of a good, the extra satisfaction (MB) from each additional unit declines.

- Ex: The fifth donut brings less satisfaction than the first
- Ex: The fifth hour of studying is less effective than the first

**Utility Maximization:** marginal utility drops as you consume more, so maximize satisfaction by shifting spending toward the good with the higher "utility per dollar" ( $MU_x/P_x$ ) until both sides are equal.

- Utility is maximized when  $(MU_x/P_x) = (MU_y/P_y)$

Keep choosing the item with the highest  $MU/P$  until you run out of \$!

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$

4 Smoothies & 2 Sandwiches

Price:	\$5	\$15
Quantity	MU of Smoothies	MU of Sandwiches
1	40	90
2	35	60
3	25	45
4	20	30
5	10	15

$$40/5 = 8$$

$$35/5 = 7$$

$$25/5 = 5$$

$$20/5 = 4$$

$$10/5 = 2$$

$$90/15 = 6$$

$$60/15 = 4$$

$$45/15 = 3$$

$$30/15 = 2$$

$$15/15 = 1$$

## Knowledge Check

Check your answers at [apdojo.com/ultimateCramSheet/answer-keys](http://apdojo.com/ultimateCramSheet/answer-keys)

a. Explain why the PPC is bowed out rather than linear.

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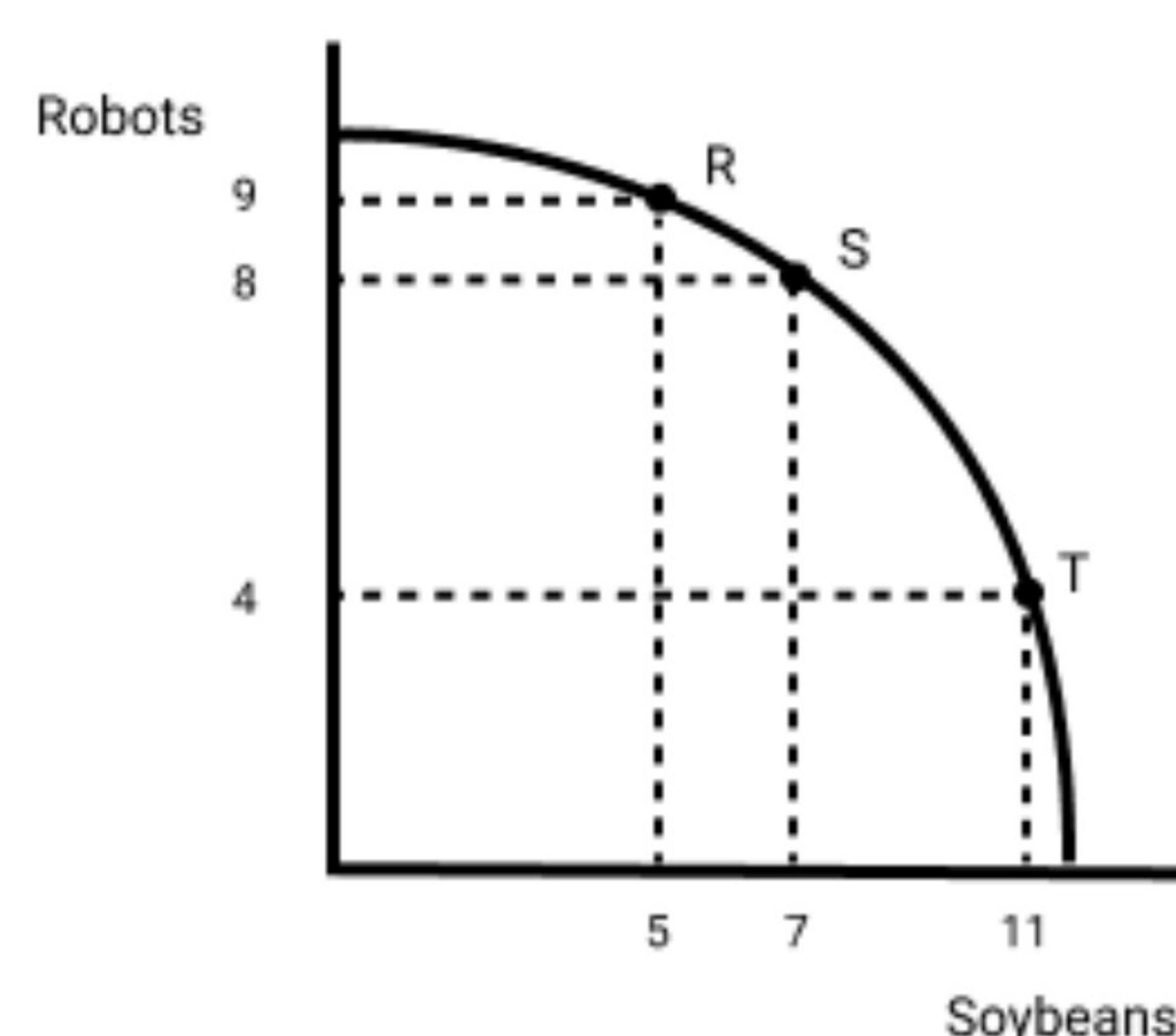
b. If Northland is currently producing 4 robots and 5 units of soybeans, what does that say about their resource utilization?

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Northland's Production Possibilities Curve



c. Calculate the opportunity cost of moving from T to point R.

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	Bicycles	Cars
Northland	80	20
Southland	100	20

d. Which country has the absolute advantage in producing bicycles?

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e. If the two countries were to specialize and trade, which country would import cars?

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f. Which of the following are acceptable terms of trade for both countries?

- 1 car for 3 bicycles
- 1 car for 4 bicycles
- 1 car for 4.5 bicycles
- 1 car for 5 bicycles
- 1 car for 6 bicycles