



Absolute Advantage, Comparative Advantage and Trade

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National Standards

STANDARD 2: DECISION MAKING . . . Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Many choices involve doing a little more or a little less of something: few choices are “all or nothing” decisions.

STANDARD 5: TRADE Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

STANDARD 6: SPECIALIZATION . . .When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

State Standards

Standard 4: Economics Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and nonmarket mechanisms.

Agenda

- We will be looking
- 1. How nations decide their trade policies through opportunity cost
- 2. Determined these decisions through input and output costs.
- 3. Terms of Trade
- 4. Activities for students to learn to understand comparative advantage

Objectives

- To have the understanding of the PPC and how it can show scarcity, opportunity cost, efficiency and economic growth
- Specialization according to comparative advantage will result in exchange of goods and services that will lead to consumption beyond the PPC (CED Macroeconomics)
- “Comparative advantage and opportunity costs determine the terms of trade for exchange under which mutually beneficial trade can occur” (CED Macroeconomics)

Assessment Questions

Can countries increase their consumption with trade?

If a country has an absolute advantage in both products, can they still benefit from trade? Explain.

How important is the terms of trade?

How can we make trade more meaningful for students?

Terminology for Trade

Tradeoff

Opportunity Cost

Absolute Advantage

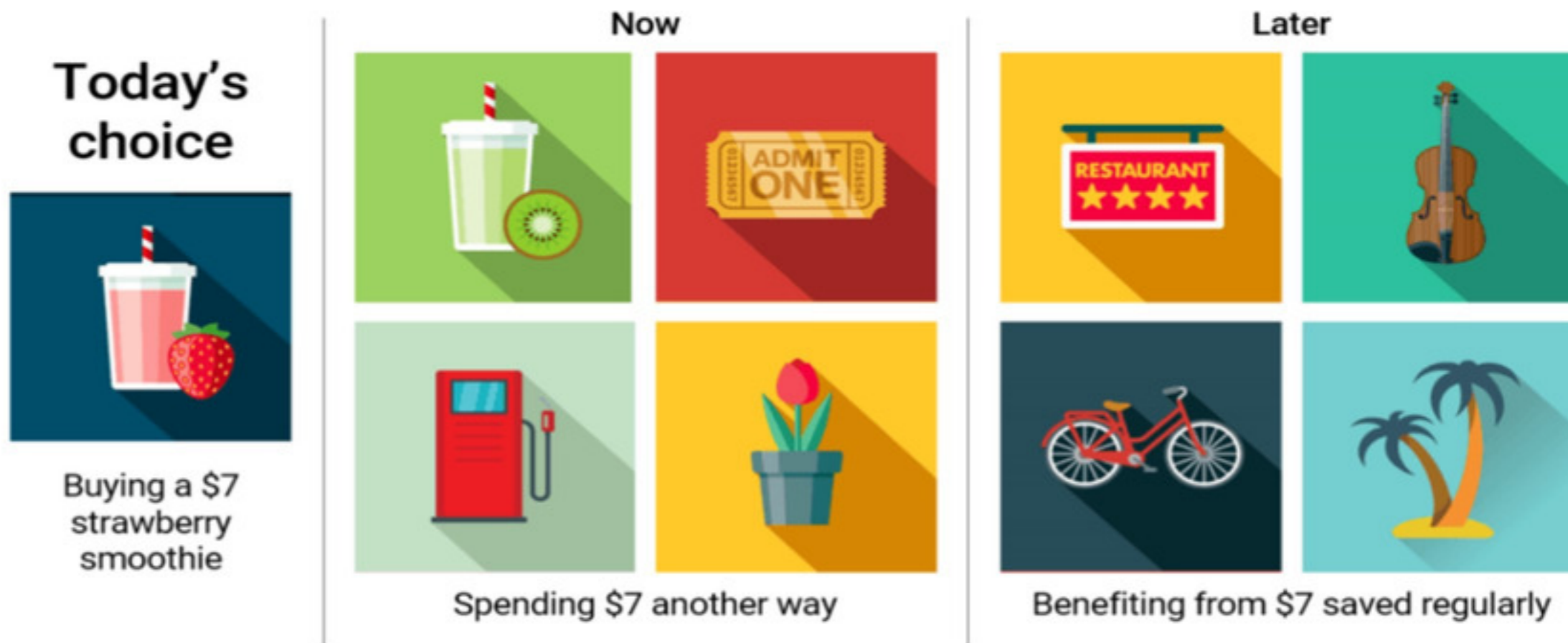
Comparative Advantage

Terms of Trade

Trading Simulation

- Brown Bag – each student bring in 8 items that they will trade.
- Collect the bags review the bags and distribute the bags the next day. Make some extras for those that do not complete the assignment.
- First have student view their bag and vote 1 (Poor) → 5 (great) record on the board
- Have students only trade with 4 other students and no one else. Record their satisfaction.
- Then have the students trade with only ½ of the class. Record their satisfaction
- Then have all the students trade with each other as many times as they want. Record
- Debrief

Every decision involves trade-offs



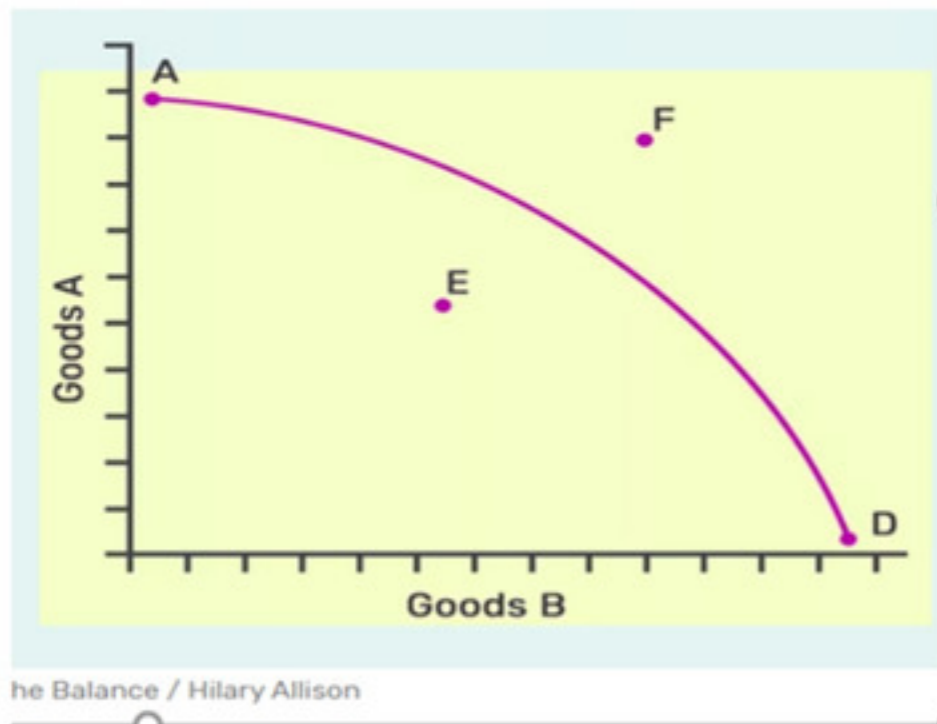
Inspired by Andrea Caceres-Santamaria, "Money and Missed Opportunities." *Page One Economics*, October 2019. Icons by Getty Images.

FEDERAL RESERVE BANK *of* ST. LOUIS

Open Ended Question

What was the last tradeoff you were involved?

What can you tell me about this PPF?



Open Ended Question



What can you tell me about this graph?

Answers

BY KIMBERLY AMADEO

REVIEWED BY THOMAS J. CATALANO on October 02, 2021

What To Know About Production Possibilities Curves

- The points show how much of each good will be produced when resources shift, thus impacting more production of one good and less of the other.

- It doesn't indicate how much of each good should be produced, but the production sacrifice needed to make more of the other good.

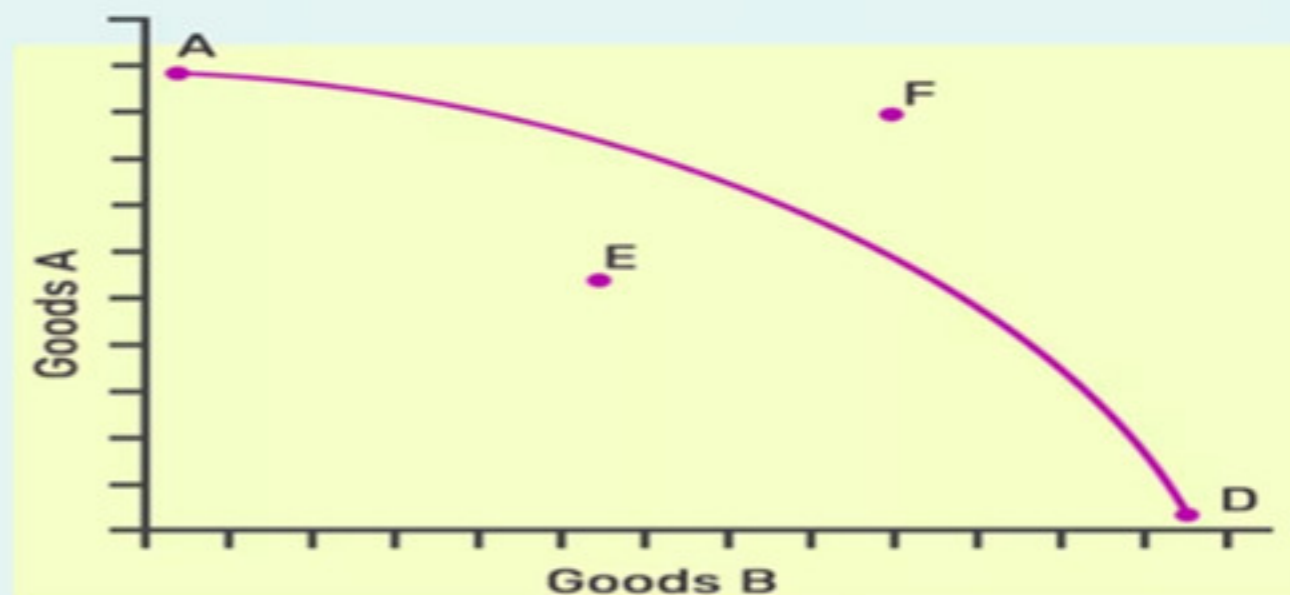
- It demonstrates the concept of opportunity cost.


E: All resources are not being used.

F: Any point outside the PPF curve is impossible; more of both goods cannot be produced with current resources.

A: More of goods A are being produced and none of goods B are being produced.

D: None of goods A are being produced and more of goods B are being produced.



 the balance

The Balance / Hilary Allison

Let's calculate the opportunity cost?

Calculating Opportunity Cost

- OC = What is sacrificed
- Measures the amount of a good that has to be sacrificed for to gain more of the other good

Rabbits	Berries
0	300
1	280
2	240
3	180
4	100
5	0

1. What is the opportunity cost to produce 1 rabbit?
2. What is the opportunity cost for going to produce 180 berries to 240 berries?

Quiz

RABBITS	BERRIES
0	300
1	280
2	240
3	180
4	100

What is the opportunity cost to produce ONE rabbit?

- 300 Berries
- 20 Berries

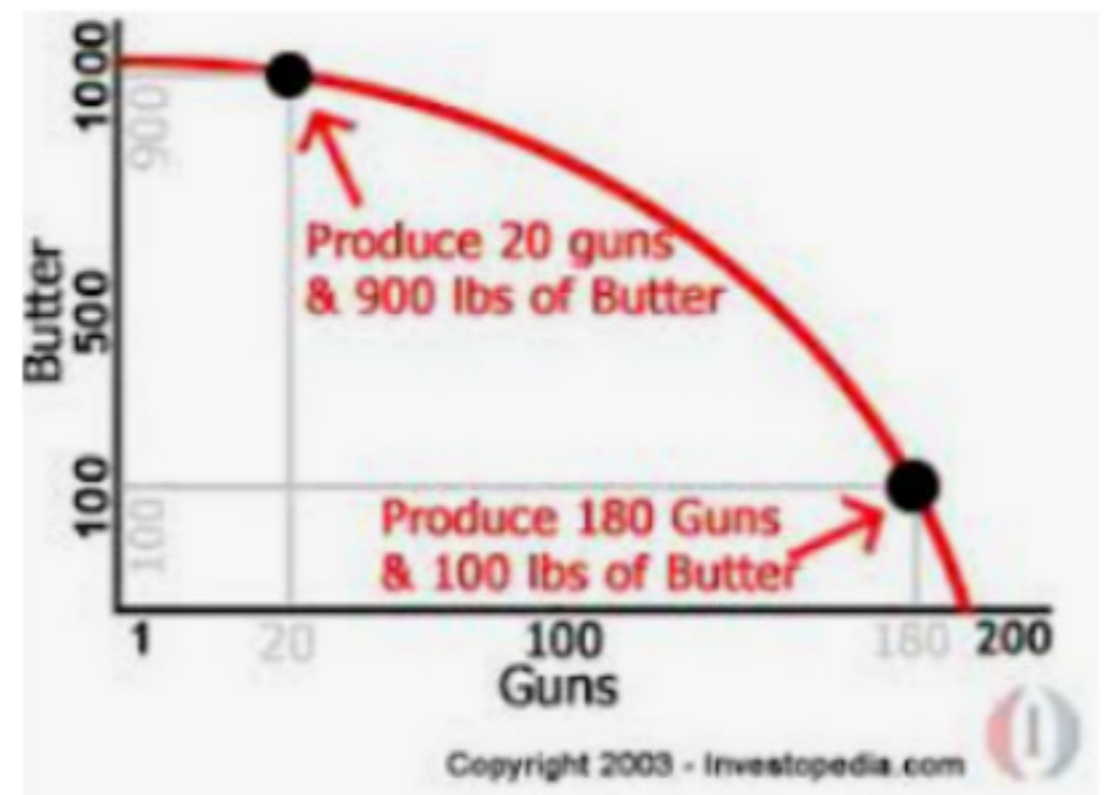
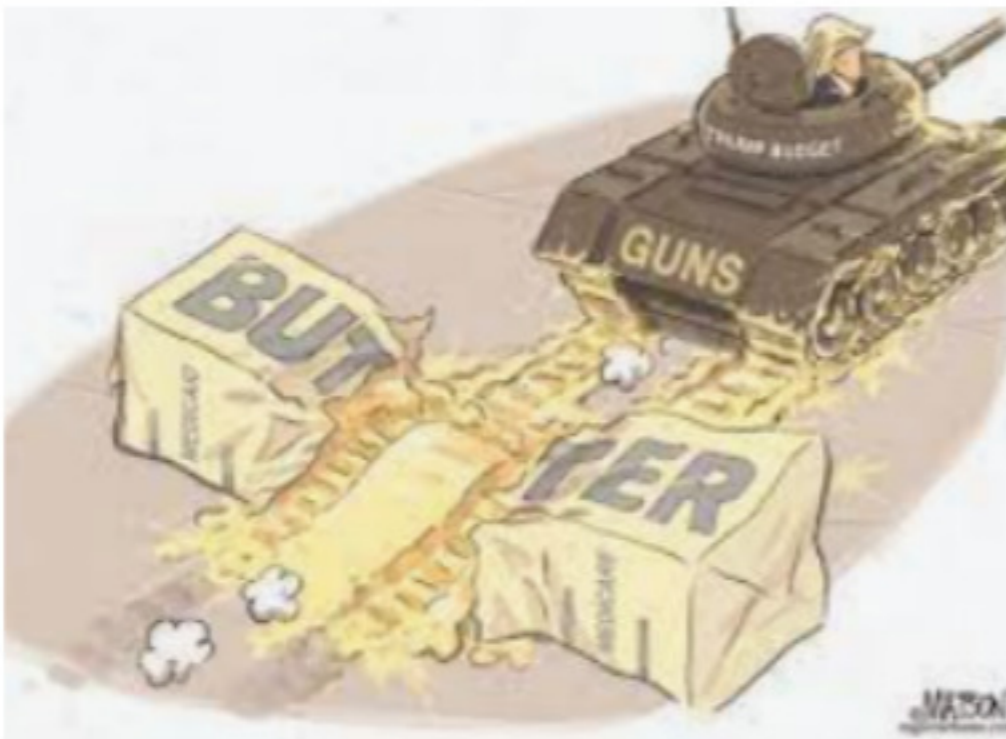
RABBITS	BERRIES
0	300
1	280
2	240
3	180
4	100

What is the opportunity cost to produce 180 to 250 Berries?

- 2 Rabbits
- 1 rabbit

Guns and Butter

This is a theory about federal government's allocations to defense versus social programs when deciding on a budget. This is a very difficult decision.



What will a country Decide?

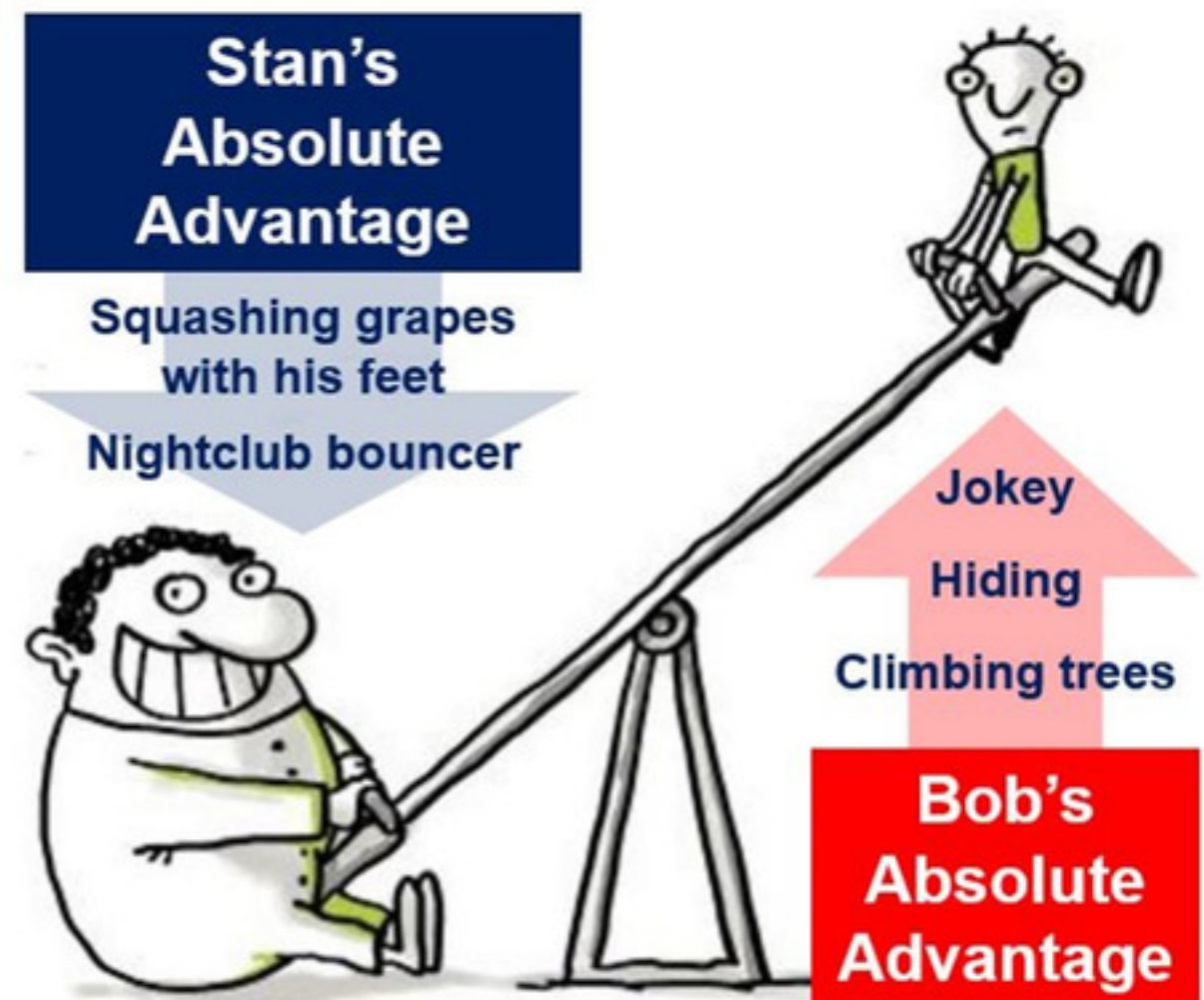
Will the country choose Butter (social programs, agriculture and consumer goods)?

Or will the country decide Guns (military and its technology)?

What does it mean if a country has an absolute advantage?

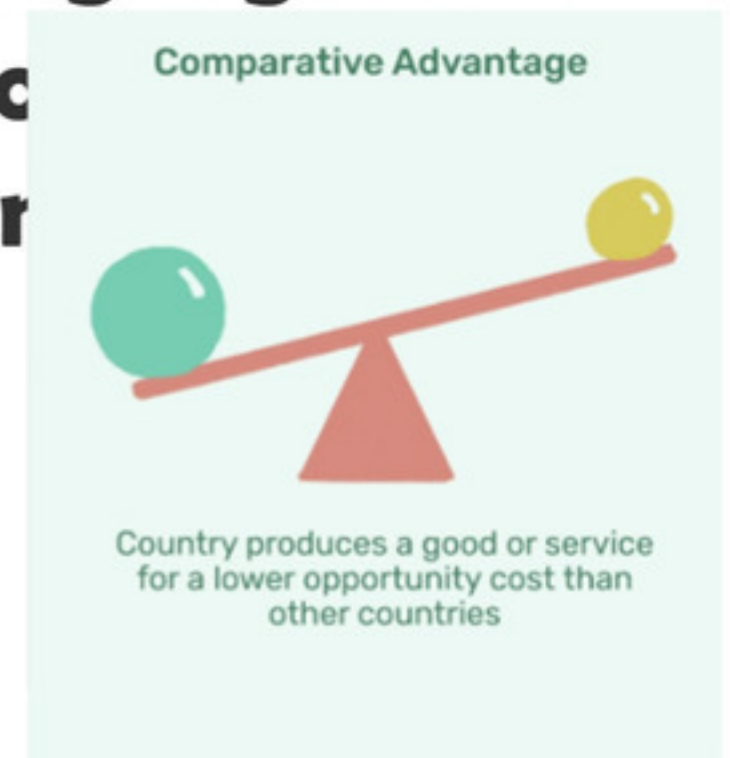
Absolute Advantage

- The ability of one person/group to produce more of a good or service with fixed resources.
- For example, if Madeline can bake 10 pies in an hour and Charlie can bake 12 pies in an hour, Charlie has an absolute advantage in baking because he can produce more pies per hour than Madeline.
- The absolute advantage goes to the **who is better at producing the good in question**; however, absolute advantage does not tell the entire story.
- To determine how resources should be used, we must investigate the concept of *comparative advantage*.



Comparative Advantage

- **"Economists say that an economy has a comparative advantage in producing a good or service if the opportunity cost of producing that good or service is lower for that economy."**
 - The ability of one person/group to produce a good or service at a *lower opportunity cost* than another person/group.
 - In other words, the person/group with the comparative advantage is **giving up the least amount of resources.**
 - When *calculating opportunity cost* there are 2 methods:
 - **outputs** (with fixed inputs)
 - **inputs** (with fixed outputs)



OUTPUT METHOD

- How many products can be produced in each time or with fixed inputs?
- When calculating opportunity costs with Outputs, use the “Other Over” formula (output and other both start with “O”). The “Other Over” formula is:
 - **Output = Other**
 - **This**

INPUT METHOD

- How much time or resources to produce one product
- When calculating opportunity costs with Inputs, use the “This over That” formula (Input and this both have “I” in their spellings). The “This over That” formula is:
 - **Input = This**
 - **That**

Hatfield and the McCoys. Will they trade with each other?

The Hatfields and the McCoys don't talk to each other very much. They would rather shoot than smile. The Hatfields are better off than the McCoys in every way. Why, it takes only 8 hours for one Hatfield to grow 1 bushel of corn and only 10 hours for one Hatfield to make 1 yard of cloth.

The McCoys aren't any more (or less) shiftless than the Hatfields, but their land is worse, and their tools aren't as good. Anyway, it takes 15 hours for one McCoy to grow 1 bushel of corn and 12 hours for one McCoy to make 1 yard of cloth. The McCoys are worse off than the Hatfields because they have to work longer for everything they want.

Now old Ma Hatfield is a sly one, and she's been sitting and rocking and thinking for years and years. One day she says, "Pa! Pa! I've been cogitating. You know what I think? I think we'd be a whole lot better off if we stopped fighting the McCoys, spent more time raising corn, and traded with the McCoys when we need cloth."

Paw spat. "Darnit, woman," he said. "We are better farmers than those varmints and better weavers, too! Besides, I don't want to be dependent on that poor excuse for a family for my clothes."

Can you help Ma and Pa settle this? Using the following worksheet, try to figure out who is right.

Will the Hatfields and the McCoys gain from trade?

To produce corn and cloth, the Hatfields must spend:

- _____ hours for 1 bushel of corn
- _____ hours for 1 yard of cloth
- _____ hours for total production of 1 bushel of corn and 1 yard of cloth

	Corn	Cloth
Hatfield	8 hrs	10 hrs
McCoys	15 hrs	12 hrs

To produce corn and cloth, the McCoys must spend:

- _____ hours for 1 bushel of corn
- _____ hours for 1 yard of cloth
- _____ hours for total production of 1 bushel of corn and 1 yard of cloth

If the Hatfields produce only corn and trade 1 bushel of corn for 1 yard of cloth, they would spend:

- _____ hours for 2 bushels of corn
- _____ hours to have 1 bushel of corn and 1 yard of cloth through trade

If the McCoys produce only cloth and trade 1 yard of cloth for 1 bushel of corn, they would spend:

- _____ hours for 2 yards of cloth
- _____ hours to have 1 yard of cloth and 1 bushel of corn through trade

Input Question

Hatfield 1 corn --> OC is 8/10 cloths

McCoys 1 corn --> OC is 15/12 of cloths

Who has a lower opportunity cost?

Hatfields--so they will be producing corn

Hatfield 1 cloth --> OC is 10/8 of corn

McCoys 1 cloth --> OC is 12/15 of corn

Who has a lower opportunity cost?

McCoys and they will be producing cloth

As a result of trade, they will both gain more time!!

But will they eventually trade?

	Corn	Cloth
Hatfields	8 hrs	10 hrs
McCoys	15 hrs	12 hrs

INPUT CHALLENGE





INPUT CHALLENGE

Country	Figs	Fish
Zarin	10 hrs	14 hrs
Abba	8 hrs	6 hrs

Who has an absolute advantage in Figs?

Who has an absolute advantage in Fish?

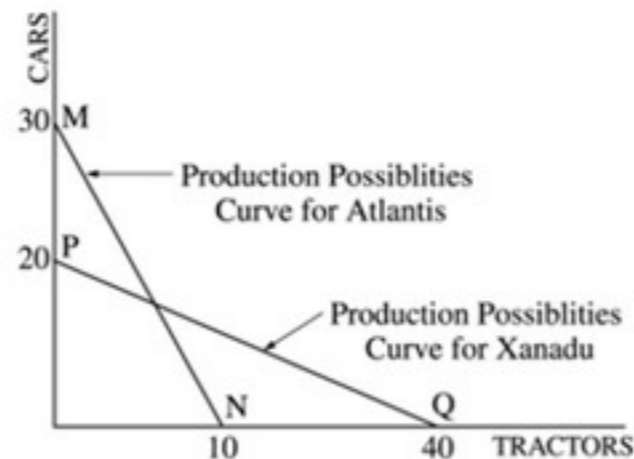
Who will export Figs? Explain

Will they benefit with trade? Explain

A large, colorful graphic with the words 'Time to Climb' in a playful, rounded font. The word 'Time' is in orange, 'TO' is in white, and 'Climb' is in yellow. A blue circular icon with a white mountain peak and a blue flag with a yellow star is positioned over the 'TO' and the start of 'Climb'. The background is a light blue sky with white clouds and stylized green and grey mountains.

Time To Climb

OUTPUT QUESTION



3. Assume that two countries, Atlantis and Xanadu, have equal amounts of resources. Atlantis can produce 30 cars or 10 tractors or any combination, as shown by the line MN in the figure above. Xanadu can produce 20 cars or 40 tractors or any combination, as shown by the line PQ in the figure above.
- Which country has an absolute advantage in the production of tractors? Explain how you determined your answer.
 - Which country has a comparative advantage in the production of cars? Using the concept of opportunity cost, explain how you determined your answer.
 - If the two countries specialize and trade with each other, which country will import cars? Explain why.
 - If the terms of trade are such that one car can be exchanged for one tractor, explain how Atlantis will benefit from such trade.

AP Collegeboard

Atlantis and Zanadu

	Cars	Tractors
Atlantis	30	10
Zanadu	20	40

1. Which country has an absolute advantage in tractors? Explain
2. Which country has a comparative advantage in cars? Explain
3. If the two countries specialized, which country would import cars?
4. If the terms of trade is 1 car for 1 tractor, would Atlantis be satisfied? Explain.

Will they trade or will their manufacture on their own?

2. Country X and Country Y are trading partners, and both produce furnaces and solar panels. The countries can produce the following amounts using equal amounts of resources.

Country X: 6 furnaces or 8 solar panels

Country Y: 6 furnaces or 12 solar panels

- Which country has an absolute advantage in producing solar panels?
- Calculate the opportunity cost of a furnace in Country Y.
- Which country has the comparative advantage in producing furnaces? Explain.
- If the terms of trade were that 2 furnaces are exchanged for 1 solar panel, should Country X produce solar panels domestically or import solar panels from Country Y?

AP Collegeboard



Time to Climb

Time To Climb

Answers

5 points (1+1+2+1)

(a) 1 point:

- One point is earned for stating that Country Y has an absolute advantage in producing solar panels.

(b) 1 point:

- One point is earned for calculating the opportunity cost of a furnace for Country Y: 2 solar panels per furnace.

(c) 2 points:

- One point is earned for stating that Country X has the comparative advantage in producing furnaces.
- One point is earned for explaining that Country X has a lower opportunity cost of producing furnaces than Country Y.

(d) 1 point:

- One point is earned for stating that Country X should produce solar panels domestically.

Should these two countries trade cars and computers?

	cars	computers
United States	4	20
Russia	1	5

1. Which country has an absolute advantage in cars?
2. Which country has a comparative advantage in cars? In computers?
3. Should these two countries trade in cars and computers? explain

Poll

	Cars	Computers
United States	4	20
Russia	1	5

Should United States and Russia trade cars and computers?

- YES
- NO

Terms of Trade

This is negotiated between the two countries based on their comparative advantage. (Collegeboard)

For example:

John and Erica are bakers and their information is as follows. If the terms of trade is 1 donut for 6 cupcakes will both be satisfied?

John's comparative advantage is 1 cupcake for 2 donuts
Erica's Comparative advantage is 1 cupcake for 3 donuts
John would be very happy however Erica cannot do 1 cupcake for 6 donuts.

	Donuts	Cupcakes
John	200	100
Erica	150	50

Terms of Trade

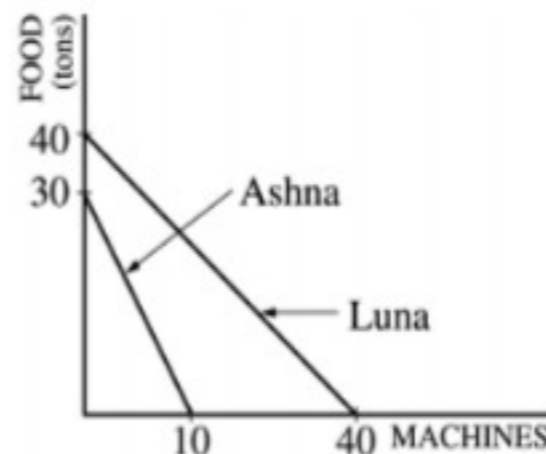
Ashna and Luna produce food and machines. Their information is as follows: (collegeboard)

Ashna's 1 machine OC is 1 food

Luna's 1 machine OC is 3 food

If the terms of trade is 1 machine for 2 food, will both countries be satisfied?

Yes, because it is greater for Ashna's 1 machine for 1 food
Luna will get now both machine and food!



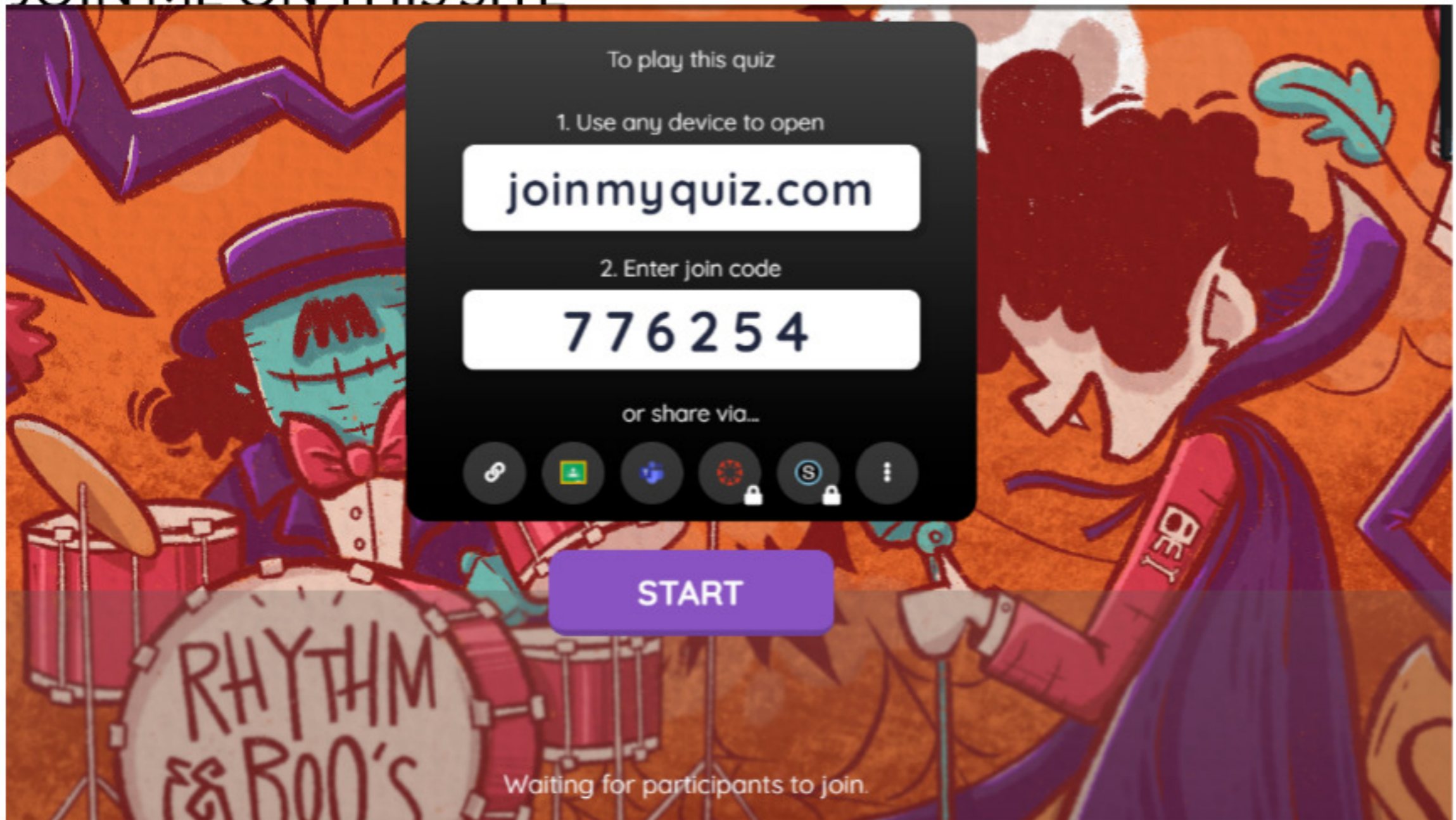
What generalization  students make about
trade?

Collaborate Board

What generalizations can students make about trade?

<https://quizizz.com/join?>

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References

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- CED Macroeconomies Collegeboard.com

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