

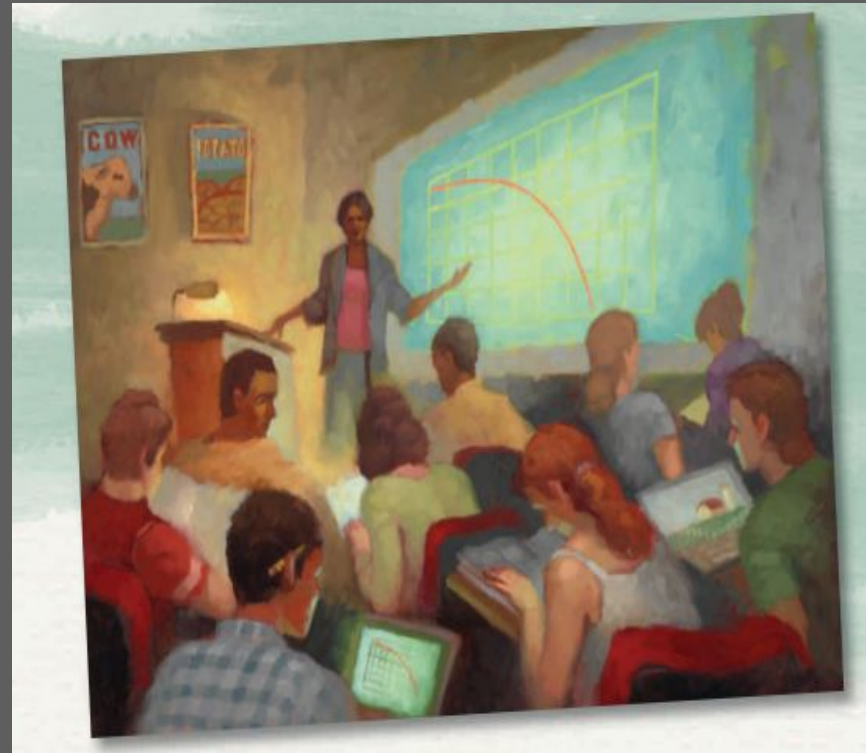
# Interdependence and Gains from Trade

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UNEC, Fall 2022

# We will learn...

- Production Possibilities
- Specialization and Trade
- Absolute Advantage
- Comparative Advantage
- Quiz 😊



# Production Possibilities

- Every day, you rely on many people, most of whom you have never met, to provide you with the goods and services that you enjoy. Such interdependence is possible because people trade with one another. Those people providing you with goods and services are not acting out of generosity. Nor is some government agency directing them to satisfy your desires. Instead, people provide you and other consumers with the goods and services they produce because they get something in return.

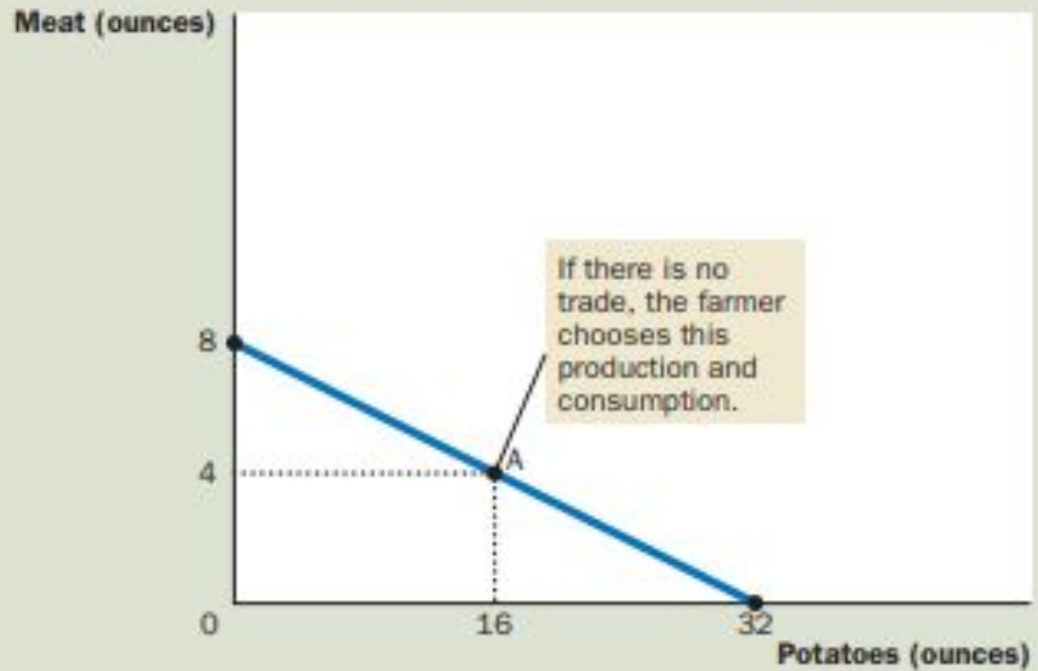
# Production Possibilities

- Rancher and farmer

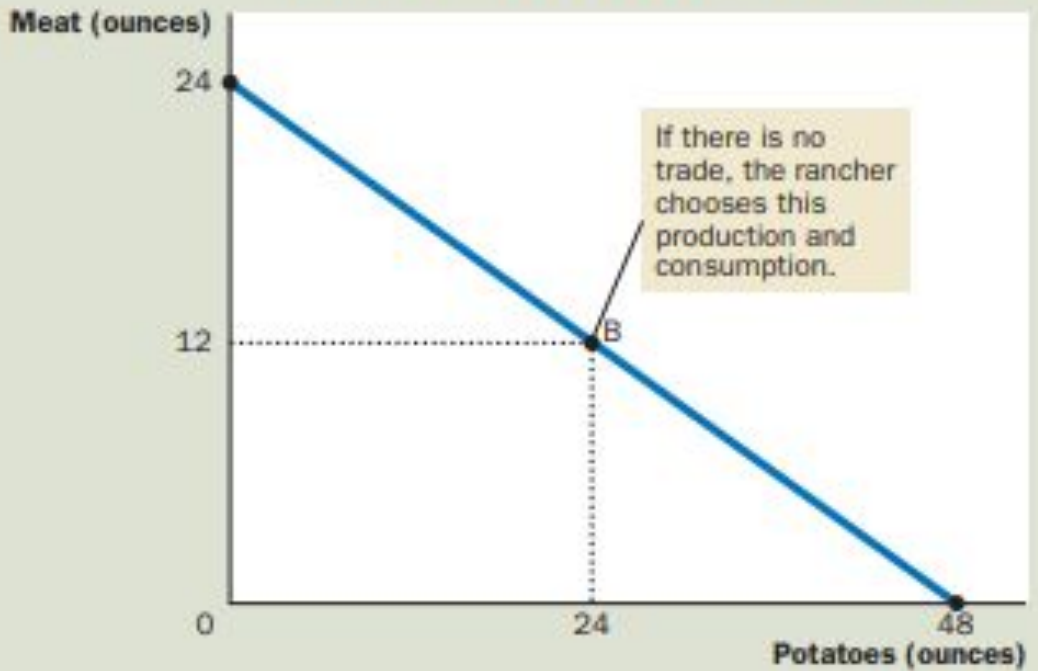
	Minutes Needed to Make 1 Ounce of:		Amount Produced in 8 Hours	
	Meat	Potatoes	Meat	Potatoes
Farmer	60 min/oz	15 min/oz	8 oz	32 oz
Rancher	20 min/oz	10 min/oz	24 oz	48 oz

# Production Possibilities

(b) The Farmer's Production Possibilities Frontier



(c) The Rancher's Production Possibilities Frontier



# Production Possibilities

- We may recall that the production possibilities frontier in Chapter 2 was drawn bowed out. In that case, the rate at which society could trade one good for the other depended on the amounts that were being produced. Here, however, farmer's technology for producing meat and potatoes (as summarized in Figure 1) allows him to switch between the two goods at a constant rate. Whenever farmer spends 1 hour less producing meat and 1 hour more producing potatoes, he reduces his output of meat by 1 ounce and raises his output of potatoes by 4 ounces—and this is true regardless of how much he is already producing. As a result, the production possibilities frontier is a straight line.

# Production Possibilities

- If farmer and rancher choose to be self-sufficient rather than trade with each other, then each consumes exactly what he or she produces. In this case, the production possibilities frontier is also the consumption possibilities frontier. That is, without trade, Figure 1 shows the possible combinations of meat and potatoes that farmer and rancher can each produce and then consume.

# Production Possibilities

- These production possibilities frontiers are useful in showing the trade-offs that farmer and rancher face, but they do not tell us what farmer and rancher will actually choose to do. To determine their choices, we need to know the tastes of farmer and rancher. Let's suppose they choose the combinations identified by points A and B in Figure 1. Based on his production opportunities and food preferences, farmer decides to produce and consume 16 ounces of potatoes and 4 ounces of meat, while rancher decides to produce and consume 24 ounces of potatoes and 12 ounces of meat.

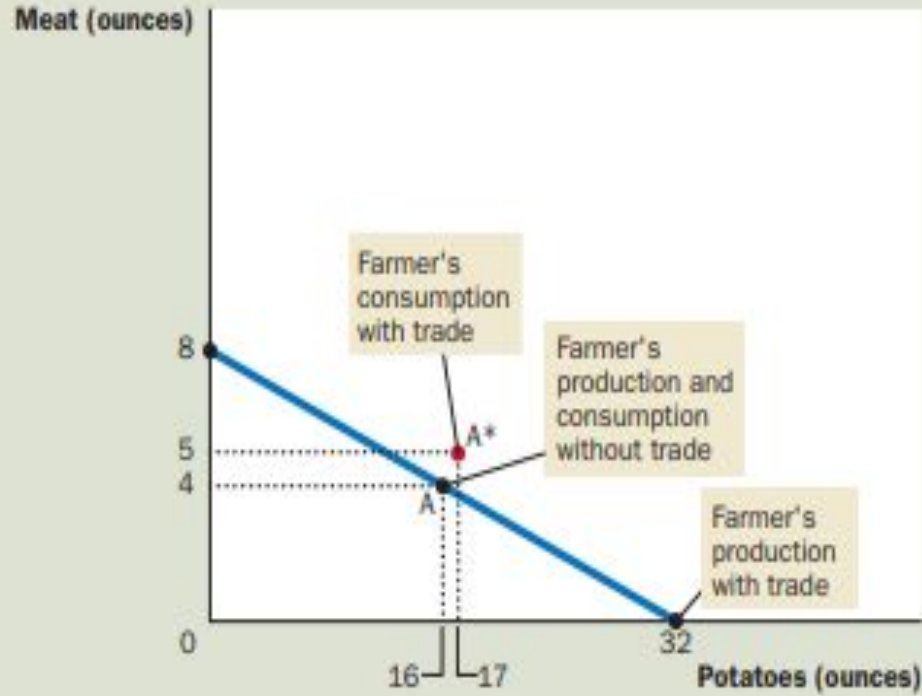


# Specialization and Trade

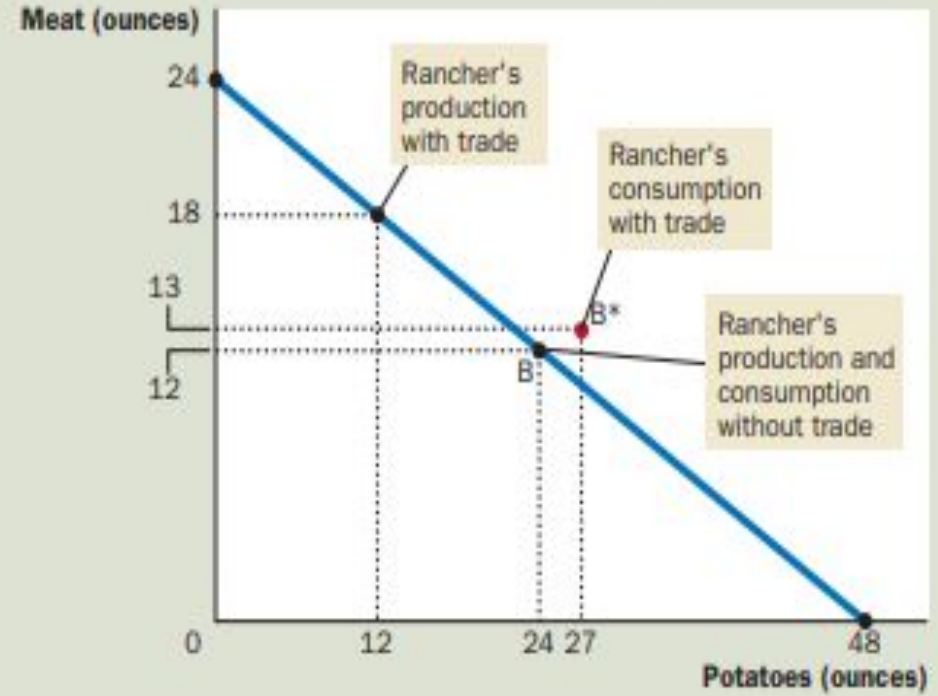
	Farmer		Rancher	
	Meat	Potatoes	Meat	Potatoes
<b>Without Trade:</b>				
Production and Consumption	4 oz	16 oz	12 oz	24 oz
<b>With Trade:</b>				
Production	0 oz	32 oz	18 oz	12 oz
Trade	Gets 5 oz	Gives 15 oz	Gives 5 oz	Gets 15 oz
Consumption	5 oz	17 oz	13 oz	27 oz
<b>GAINS FROM TRADE:</b>				
Increase in Consumption	+1 oz	+1 oz	+1 oz	+3 oz

# Specialization and Trade

(a) The Farmer's Production and Consumption



(b) The Rancher's Production and Consumption



# Absolute Advantage

- The principle of absolute advantage was introduced to economics by Adam Smith.
- **Absolute advantage** - the ability to produce a good using fewer inputs than another producer.

# Absolute Advantage

	Minutes Needed to Make 1 Ounce of:		Amount Produced in 8 Hours	
	Meat	Potatoes	Meat	Potatoes
Farmer	60 min/oz	15 min/oz	8 oz	32 oz
Rancher	20 min/oz	10 min/oz	24 oz	48 oz

# Comparative Advantage

- The principle of comparative advantage was introduced to economics by David Ricardo.
- **Comparative Advantage** - the ability to produce a good at a lower opportunity cost than another producer.

# Comparative Advantage and Opportunity Cost

	Opportunity Cost of:	
	1 oz of Meat	1 oz of Potatoes
Farmer	4 oz potatoes	$\frac{1}{4}$ oz meat
Rancher	2 oz potatoes	$\frac{1}{2}$ oz meat

# Comparative Advantage and Trade

- Trade can benefit everyone in society because it allows people to specialize in activities in which they have a comparative advantage.
- For both parties to gain from trade, the price at which they trade must lie between the two opportunity costs.
- During trade each of them gets the goods at a lower price than his alternative costs for this product.

# Comparative Advantage and Trade

- Consider the proposed deal from farmer's viewpoint. Farmer receives 5 ounces of meat in exchange for 15 ounces of potatoes. In other words, farmer buys each ounce of meat for a price of 3 ounces of potatoes. This price of meat is lower than his opportunity cost for an ounce of meat, which is 4 ounces of potatoes. Thus, farmer benefits from the deal because he gets to buy meat at a good price.
- Now consider the deal from rancher's viewpoint. Rancher buys 15 ounces of potatoes at a cost of 5 ounces of meat. That is, the price for an ounce of potatoes is  $\frac{1}{3}$  ounce of meat. This price of potatoes is lower than her opportunity cost of an ounce of potatoes, which is  $\frac{1}{2}$  ounce of meat. Rancher benefits because she gets to buy potatoes at a good price.



# Trade

- **Import** – goods produced abroad and sold domestically;
- **Export** – goods produced domestically and sold abroad.

# Comparative advantage problem

	Cloth	Bag
Germany	5	10
USA	20	20

1. Find the countries that have absolute advantage for each product.
2. Find the countries that have comparative advantage for each product.
3. Indicate the products imported and exported by country.

**Any question or  
comment ? 😊**