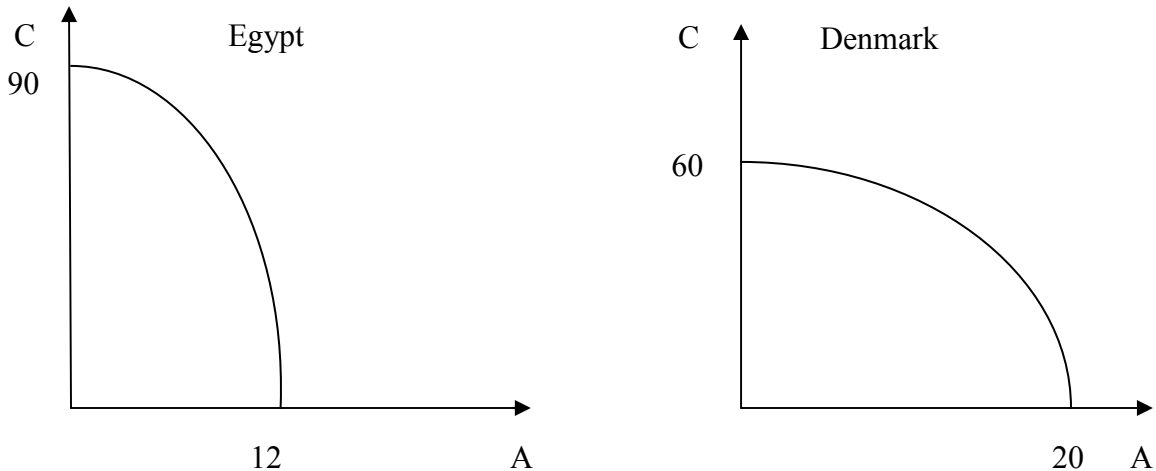


PRINCIPLES OF MICROECONOMICS (ECON 1101 SECTION 056)
ASSIGNMENT #6
Answers

1. (25 points) Suppose that with some fixed amount of resources, Denmark and Egypt may produce antibiotics and cotton as follows:

	Antibiotics	Cotton
Denmark	20 capsules	60 yards
Egypt	12 capsules	90 yards

- (a) Draw separate production possibility curves for each country.



- (b) Calculate the opportunity costs of producing each good in each country.

	Antibiotics	Cotton
Denmark	3 yards of cotton	1/3 capsules
Egypt	7.5 yards of cotton	2/15 capsules

- (c) Which country has the absolute advantage in producing antibiotics? **Denmark** can produce more antibiotics with the fixed resources.
- (d) Which country has the absolute advantage in producing cotton? **Egypt** can produce more cotton with the fixed resources.
- (e) Which country has the comparative advantage in producing antibiotics? **Denmark** has a lower opportunity cost for producing antibiotics.
- (f) Which country has the comparative advantage in producing cotton? **Egypt** has a lower opportunity cost for producing cotton.

2. (25 points) Suppose that with some fixed amount of resources, Germany and Hungary may produce sports cars and sunflower seeds as follows:

	Sports cars	Sunflower seeds
Germany	2 cars	10 bushels
Hungary	1 car	7 bushels

- (a) Calculate the opportunity costs of producing each good in each country.

	Sports cars	Sunflower seeds
Germany	5 bushels of seeds	1/5 car
Hungary	7 bushels of seeds	1/7 car

- (b) Which country has the absolute advantage in producing sports cars? **Germany** can produce more sports cars with the fixed resources.
- (c) Which country has the absolute advantage in producing sunflower seeds? **Germany** can produce more sunflower seeds with the fixed resources.
- (d) Which country has the comparative advantage in producing sports cars? **Germany** has a lower opportunity cost for producing sports cars.
- (e) Which country has the comparative advantage in producing sunflower seeds? **Hungary** has a lower opportunity cost for producing sunflower seeds.
3. (20 points) Read “Tariffs and Tortillas.” (2008, Jan. 26) *The Economist*. p. 38.
- (a) What places does the article suggest have a comparative advantage in maize (corn) production?
The article suggests place like Iowa and Saskatchewan have a comparative advantage, since they have large fields, abundant water, and access to mechanization.
- (b) What policies promoted growing corn in places without a comparative advantage? How did the policies promote this?
Mexican tariffs on imported maize give Mexican maize a cost advantage in local markets. Subsidies to farmers give them additional incentives to keep farming.
- (c) What groups would benefit from the reduction of trade restrictions?
The reduction of trade restrictions by Mexico would benefit farmers outside of Mexico and consumers within Mexico.

4. (25 points) Suppose the demand for dry whey is given by $P = 41 - 2Q$ and the supply curve is given by $P = 17 + Q$.

- (a) Calculate the competitive equilibrium price, quantity, consumer surplus, and producer surplus.

$$\begin{aligned}
 41 - 2Q &= 17 + Q \\
 24 - 2Q &= Q \\
 24 &= 3Q \\
 Q &= 8
 \end{aligned}$$

$$P = 17 + 8 = 25$$

$$CS = (1/2)(8)(41 - 25)$$

$$CS = 64$$

$$PS = (1/2)(8)(25 - 17)$$

$$PS = 32$$

- (b) Calculate the after-tax price, quantity, consumer surplus, and producer surplus if a per unit tax of 2 is imposed on the purchaser.

$$41 - 2 - 2Q = 17 + Q$$

$$22 - 2Q = Q$$

$$22 = 3Q$$

$$Q = 7.33$$

$$P = 17 + 7.33 + 2$$

$$P = 26.33$$

$$\text{or } P = 41 - 2(7.33) = 26.33$$

$$CS = (1/2)(7.33)(41 - 26.33)$$

$$CS = 53.78$$

$$PS = (1/2)(7.33)(24.33 - 17)$$

$$PS = 26.89$$