

Exercise walk-through

1.4

Comparative Advantage and Gains from Trade

AP Microeconomics

Absolute vs comparative advantage

absolute advantage

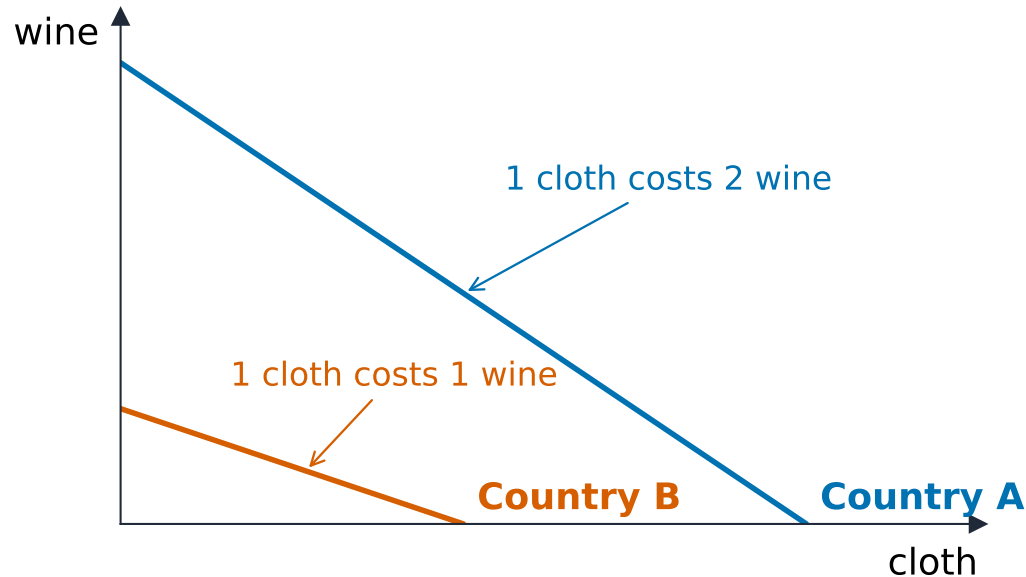
makes **more** with
the same resources

comparative advantage

has the **lower opportunity cost**

Specialize where opportunity cost is lower, then **trade** at mutually beneficial terms. One producer may have absolute advantage in both goods.

Absolute vs comparative advantage, in detail



Comparative advantage comes from differently-sloped production possibilities curves

Comparative advantage – worked example

Output per day: constant opportunity costs

Producer	Phones only	Shirts only
X	10	20
Y	4	4

$$OC_{\text{phone}} = \frac{\text{shirts forgone}}{\text{phones gained}}$$

$$OC_{\text{phone},X} = \frac{20}{10} = 2 \text{ shirts}; \quad OC_{\text{phone},Y} = \frac{4}{4} = 1 \text{ shirt}$$

Y has the lower phone cost. X has the lower shirt cost: 0.5 phone versus 1 phone. X has absolute advantage in both.

Show a gain for each trading partner

Continue X and Y: exchange 1 phone for 1.5 shirts

For X, making a phone costs 2 shirts; importing it costs 1.5. X saves 0.5 shirt per phone.

For Y, making a phone costs 1 shirt; exporting it earns 1.5. Y gains 0.5 shirt per phone traded.

$$1 < \text{shirts per phone traded} < 2$$

These **terms of trade** are strictly between both costs. At an endpoint one partner is indifferent; equal opportunity costs leave no such interval in this model.

Input tables: hours, not output

Fictional labor hours per unit

Producer	Hours per phone	Hours per shirt
A	2	1
B	3	6

$$OC_{\text{phone}} = \frac{\text{hours per phone}}{\text{hours per shirt}}$$

$$OC_{\text{phone},A} = \frac{2}{1} = 2 \text{ shirts}; \quad OC_{\text{phone},B} = \frac{3}{6} = 0.5 \text{ shirt}$$

B has the lower opportunity cost. A uses fewer hours for both goods: absolute advantage differs from comparative advantage.

Exercises 2.1-2.3

2.1 State the difference between absolute and comparative advantage. [2]

2.2 State how specialization and trade let a country consume beyond its own PPC. [1]

2.3 Country A can make 12 wheat **or** 6 cloth. Find A's opportunity cost of 1 cloth. [2]

Exercises 2.1-2.3

2.1 State the difference between absolute and comparative advantage. [2]

2.1

- absolute advantage is producing more with the same resources; comparative advantage is producing at a lower opportunity cost

2.2 State how specialization and trade let a country consume beyond its own PPC. [1]

2.2

- each specializes where its opportunity cost is lowest, then trades, so both get more than they could produce alone

2.3 Country A can make 12 wheat **or** 6 cloth. Find A's opportunity cost of 1 cloth. [2]

2.3

- 1 cloth costs $\frac{12}{6} = 2$ wheat

Exercises 3.1-3.2

3.1 A mutually beneficial terms of trade lies

[1]

☐

- A above both parties' opportunity costs
- B between the two parties' opportunity costs
- C below both parties' opportunity costs
- D at exactly zero

3.2 Specialization should be based on

[1]

☐

- A absolute advantage
- B comparative advantage
- C population size
- D tariffs

Exercises 3.1-3.2

3.1 A mutually beneficial terms of trade lies

[1]

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- A above both parties' opportunity costs
- B between the two parties' opportunity costs
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- D at exactly zero

3.1 B

- between the two parties' opportunity costs.

3.2 Specialization should be based on

[1]

☐

- A absolute advantage
- B comparative advantage
- C population size
- D tariffs

3.2 B

- comparative advantage.

Exercise 3.3 (a)

3.3 In a day, Maya makes 6 tables **or** 12 chairs; Leo makes 2 tables **or** 8 chairs.

(a) Find Maya's opportunity cost of 1 table.

[1]

Exercise 3.3 (a)

3.3 In a day, Maya makes 6 tables **or** 12 chairs; Leo makes 2 tables **or** 8 chairs.

(a) Find Maya's opportunity cost of 1 table.

[1]

(a)

- 2 chairs

Exercise 3.3 (b)

3.3 In a day, Maya makes 6 tables **or** 12 chairs; Leo makes 2 tables **or** 8 chairs.

(b) Find Leo's opportunity cost of 1 table.

[1]

Exercise 3.3 (b)

3.3 In a day, Maya makes 6 tables **or** 12 chairs; Leo makes 2 tables **or** 8 chairs.

(b) Find Leo's opportunity cost of 1 table.

[1]

(b)

- 4 chairs

Exercise 3.3 (c)

3.3 In a day, Maya makes 6 tables **or** 12 chairs; Leo makes 2 tables **or** 8 chairs.

(c) State who should specialize in tables.

[1]

Exercise 3.3 (c)

3.3 In a day, Maya makes 6 tables **or** 12 chairs; Leo makes 2 tables **or** 8 chairs.

(c) State who should specialize in tables.

[1]

(c)

- Maya – her opportunity cost (2 chairs) is lower