

True/ False/ Uncertain questions:

1. Labor abundant countries will export goods labor intensive products.

Uncertain. The pattern of trade depends on the relative abundance of a factor, not on absolute abundance. So, if a labor abundant country is relatively more abundant than others than it will export the relatively labor-intensive good, otherwise it is not the case.

Example:

	<i>Home</i>	<i>Foreign</i>
Labor	600	800
Capital	300	600

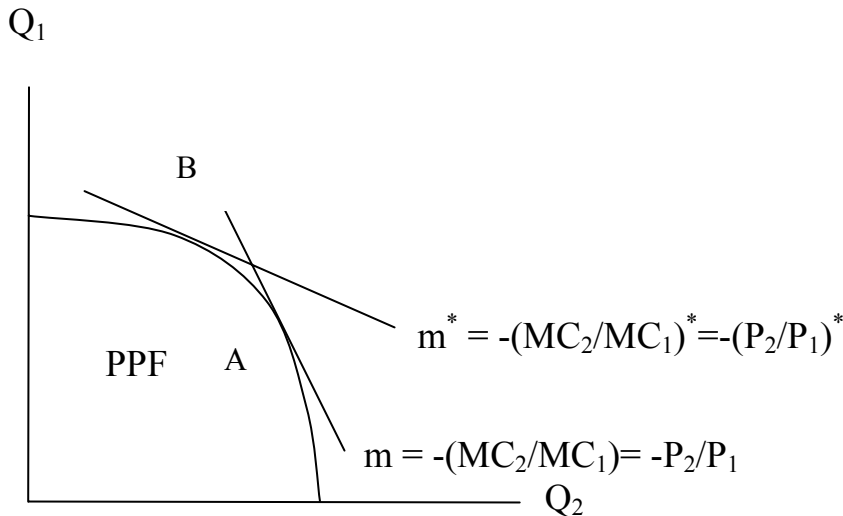
Observe that both countries are have more labor than capital, and that foreign has absolutely more labor than home. However, home is relatively labor abundant.

$$\frac{L^H}{K^H} = 2 \quad \frac{L^F}{K^F} = 4/3$$

$\frac{L^H}{K^H} > \frac{L^F}{K^F}$ Therefore, Home is relatively labor abundant country and Foreign is relatively capital abundant country. According to H-O model, Home will export labor intensive goods and Foreign will export capital-intensive goods. So, even though Foreign has more labor, it is relatively capital abundant and it will export capital-intensive goods.

2. When countries trade, relative product prices equal opportunity costs provided that both countries are diversified in production.

True.



For each good one country produces, marginal cost equals the price, i.e. relative prices equal opportunity costs. The relative prices are the slopes of the tangent lines to the PPF. Let P_1 (price of good 1) go up. Then P_2/P_1 goes down, i.e. the tangent line to the PPF becomes flatter and we move from point A to point B. The country becomes more specialized in good 1.

When we hit the axes (the country become completely specialized in good 1), the opportunity cost cannot change anymore, but the relative price P_2/P_1 could go up and exceed opportunity cost. So, if the country is not diversified in production, relative prices may not equal opportunity costs.

3. A cloth manufacturer currently has $(MPL/w) > (MPK/r)$. It should use more capital.

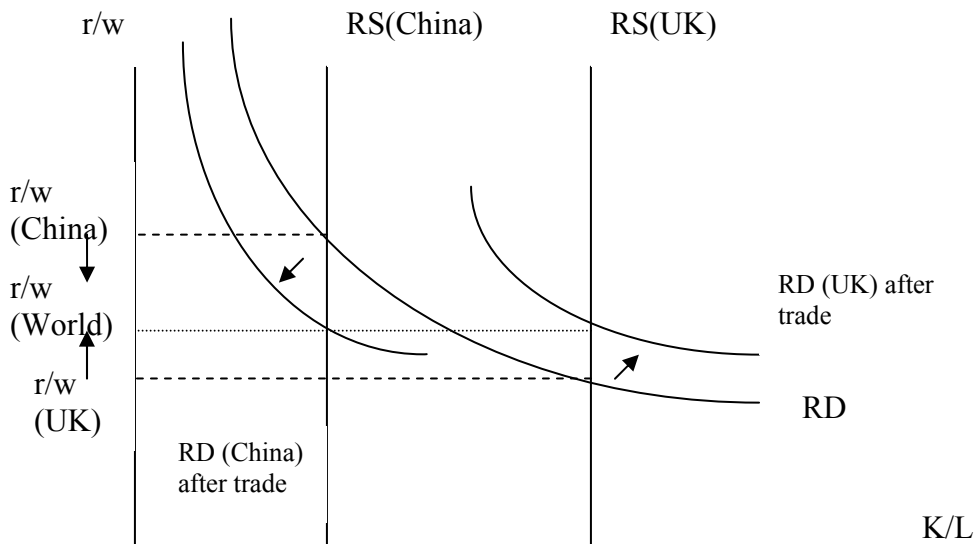
False. Under these conditions capital is less valuable in terms of marginal production than its cost. The firm should use less capital (or, it could hire more labor).

4. Free trade makes everybody in a country better off.

False. Trade leads to the expansion of a nation's consumption possibilities frontier and an improvement in aggregate welfare. **However**, owners of a country's "abundant" factors gain from trade, while owners of a country's "scarce" factors lose.

5. Free trade in goods causes a convergence in goods prices across countries, and convergence in the ratio of (w/r) across countries.

True. Factor price equalization (see answer for short answer questions 8 and 9)



6. The autarky factor price ratio (w/r) in China is higher than (w/r) in UK.

False. China is labor abundant which means that is capital scarce. The relative price of labor/capital in China is lower than the relative price of labor/capital in UK. (see above graph)

7. With free trade, the factor price ratio (r/w) in China is lower than (r/w) in UK.

False. Free trade will tend to equalize factor prices. (see above graph)

8. Trade between China and UK will increase the relative price of labor intensive goods in the UK.

False. China will export labor intensive goods (China is labor abundant) and UK will export capital intensive goods (UK is capital abundant). The relative price of labor intensive goods will rise in China and will fall in UK. The relative price of capital intensive goods will rise in UK and will fall in China.

9. Immigration of labor from China to the UK would decrease the quantity of capital-intensive products produced in the UK.

True. Immigration of labor from China to the UK will increase the RS of labor and the relative price of labor will decrease. Therefore, it will be more expensive to produce capital intensive goods. (see pages 72-73 in the textbook for further discussion)

10. Foreign investment from the UK to China would lower the factor price ratio (r/w) in China and raise it in the UK.

True. Foreign investment from UK to China will increase the RS of capital in China and the relative price of capital will decrease.

Foreign investment from UK to China will decrease the RS of capital in UK and the relative price of capital will increase. (see pages 72-73 in the textbook for further discussion)

Short Answer

Setup:

Two countries: Home and Foreign
Two factors: Land (T) and Labor (L)
Two goods: cloth (C) and food (F)

Home: $L^H = 600$ hrs of labor
 $T^H = 300$ acres of land

Foreign: $L^F = 300$ hrs of labor
 $T^F = 300$ acres of land

$$\frac{L^H}{T^H} = 2$$

$$\frac{L^F}{T^F} = 1$$

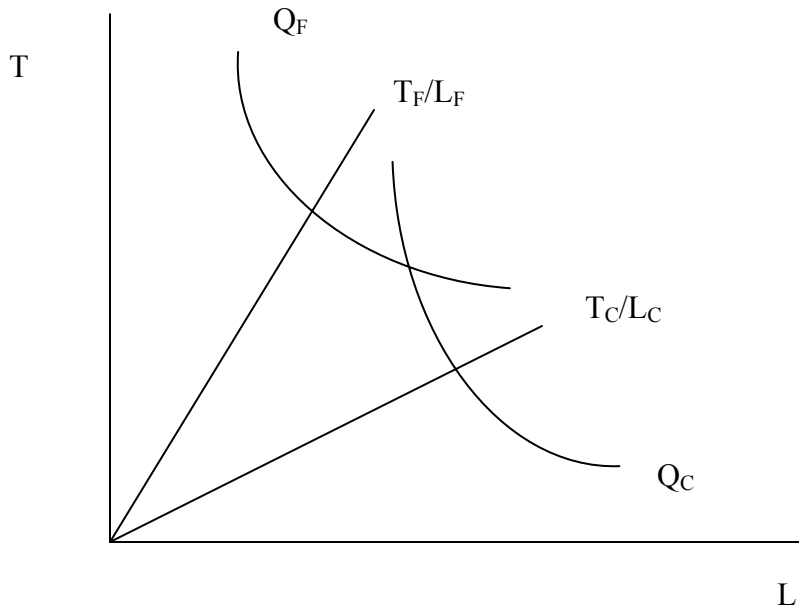
$\frac{L^H}{T^H} > \frac{L^F}{T^F}$ So, Home is relatively labor abundant country and Foreign is relatively land-abundant country.

Notation: *superscript H – Home*
superscript F – Foreign
superscript W- World
subscript F – food
subscript C - cloth

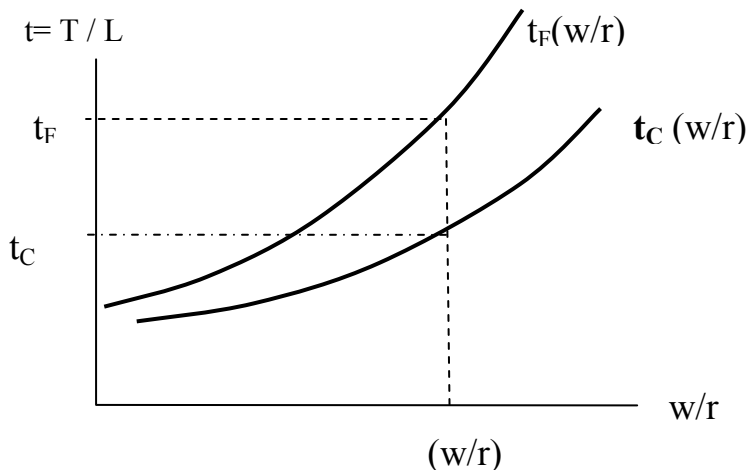
1. One yard of **cloth** is produced using 20 hours of labor and 5 acres of land, and one tone of **food** is produced using only 5 hours of labor and 10 acres of land.

Labor is used intensively in cloth production
Land is used intensively in food production.

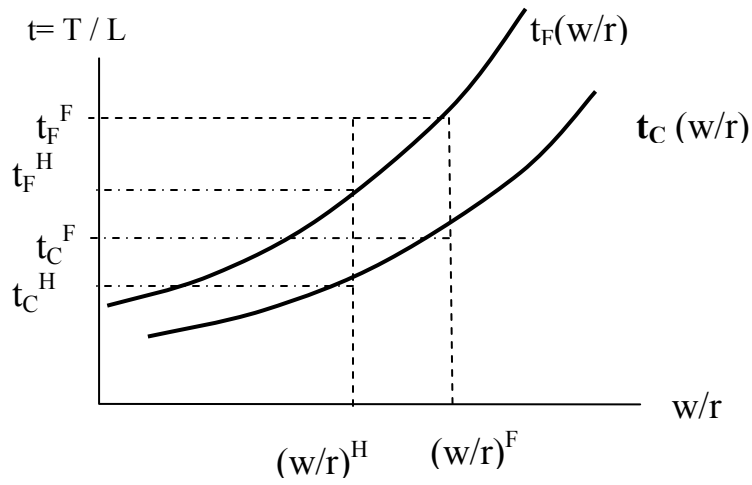
2. The isoquants for cloth and food production are shown in the picture below. The position relative to each other show which good is relative labor intensive and which one is relatively land intensive.



3.

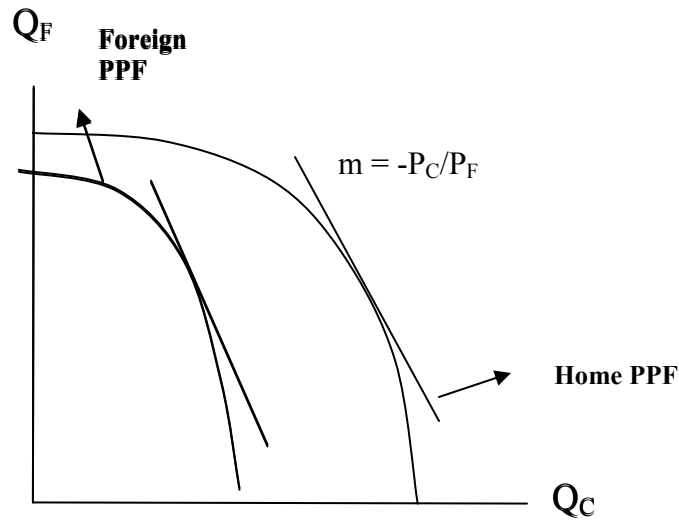


4.

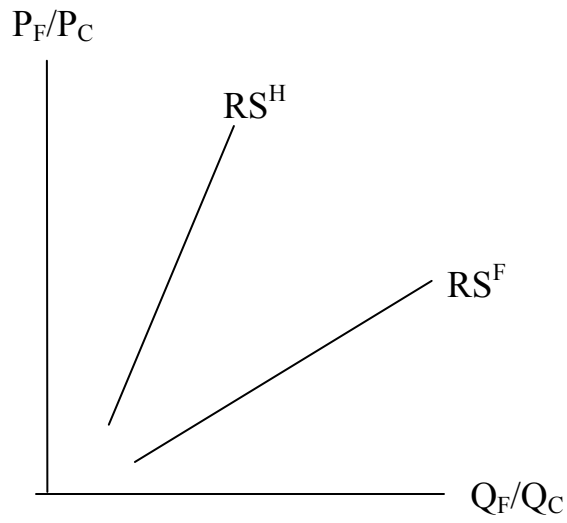


Home is relatively labor abundant and Foreign is relatively land-abundant. Therefore, the relative factor price of labor is higher in Foreign (labor is a relatively scarce factor in Foreign). This makes the mix of labor/land to be different in Home and Foreign.

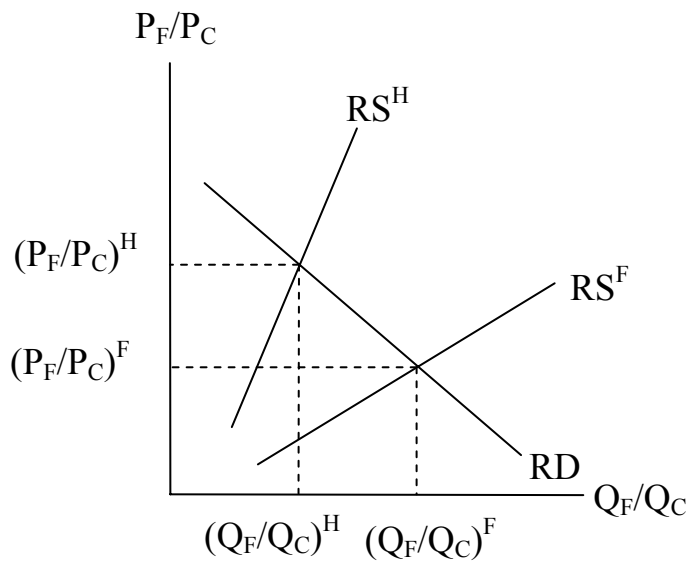
5.



6.

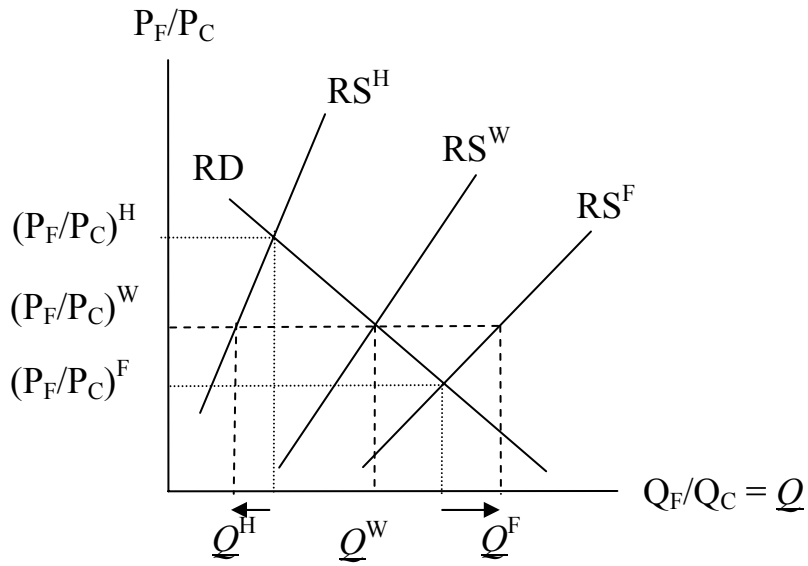


7.



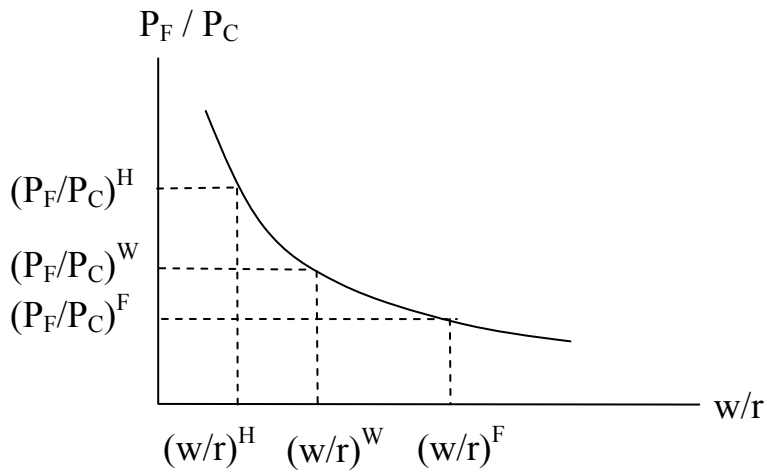
Home has the highest relative price for food /clothing.

8.



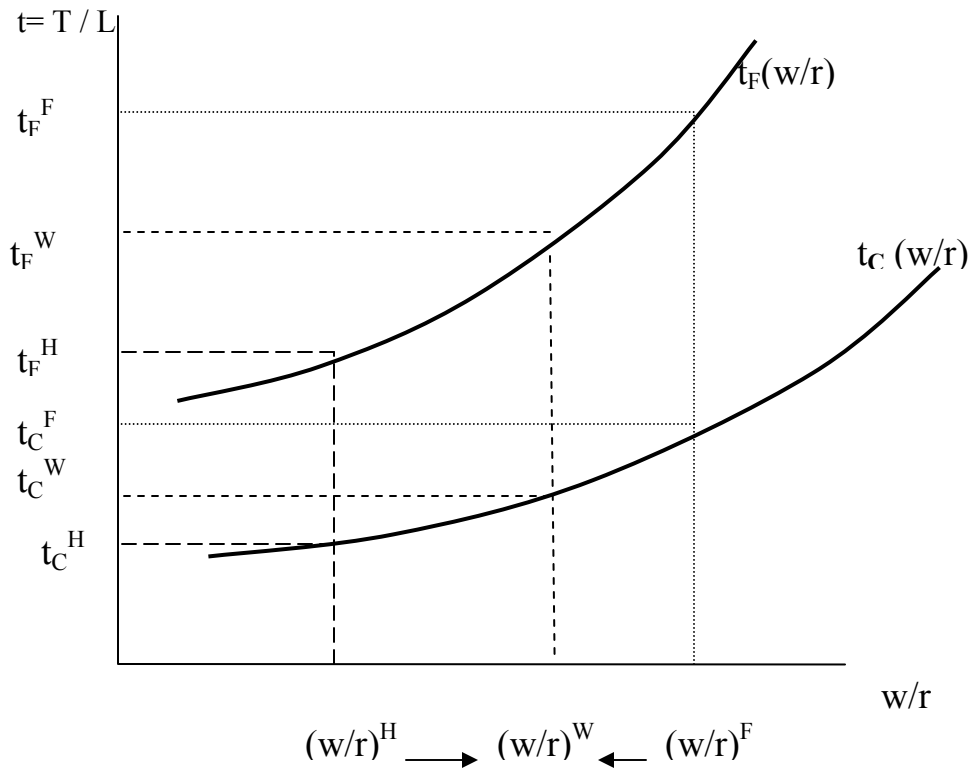
The relative world price of food will settle down between the autarky prices. Foreign will export food and Home will export cloth.

9.



The goods relative prices will equalize. As the above graph shows, the relative price of labor will equalize also.

10.



The relative prices of labor will equalize in the two countries (see answer 9). Therefore, we will have a convergence in the choice of input techniques for food and clothing