## Self-Check Questions

[1](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-19#fs-idp150363376-solution).

True or False: The source of comparative advantage must be natural elements like climate and mineral deposits. Explain.

[2](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-19#fs-idp176454304-solution).

Brazil can produce 100 pounds of beef or 10 autos. In contrast the United States can produce 40 pounds of beef or 30 autos. Which country has the absolute advantage in beef? Which country has the absolute advantage in producing autos? What is the opportunity cost of producing one pound of beef in Brazil? What is the opportunity cost of producing one pound of beef in the United States?

[3](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-19#fs-idp49111808-solution).

In France it takes one worker to produce one sweater, and one worker to produce one bottle of wine. In Tunisia it takes two workers to produce one sweater, and three workers to produce one bottle of wine. Who has the absolute advantage in production of sweaters? Who has the absolute advantage in the production of wine? How can you tell?

[4](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-19#fs-idp72842560-solution).

In Germany it takes three workers to make one television and four workers to make one video camera. In Poland it takes six workers to make one television and 12 workers to make one video camera.

1. Who has the absolute advantage in the production of televisions? Who has the absolute advantage in the production of video cameras? How can you tell?
2. Calculate the opportunity cost of producing one additional television set in Germany and in Poland. (Your calculation may involve fractions, which is fine.) Which country has a comparative advantage in the production of televisions?
3. Calculate the opportunity cost of producing one video camera in Germany and in Poland. Which country has a comparative advantage in the production of video cameras?
4. In this example, is absolute advantage the same as comparative advantage, or not?
5. In what product should Germany specialize? In what product should Poland specialize?

[5](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-19#fs-idm56281808-solution).

How can there be any economic gains for a country from both importing and exporting the same good, like cars?

[6](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-19#fs-idm20174080-solution).

[Table 19.15](#Table_33_16) shows how the average costs of production for semiconductors (the “chips” in computer memories) change as the quantity of semiconductors built at that factory increases.

1. Based on these data, sketch a curve with quantity produced on the horizontal axis and average cost of production on the vertical axis. How does the curve illustrate economies of scale?
2. If the equilibrium quantity of semiconductors demanded is 90,000, can this economy take full advantage of economies of scale? What about if quantity demanded is 70,000 semiconductors? 50,000 semiconductors? 30,000 semiconductors?
3. Explain how international trade could make it possible for even a small economy to take full advantage of economies of scale, while also benefiting from competition and the variety offered by several producers.

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| --- | --- |
| Quantity of Semiconductors | Average Total Cost |
| 10,000 | $8 each |
| 20,000 | $5 each |
| 30,000 | $3 each |
| 40,000 | $2 each |
| 100,000 | $2 each |

Table 19.15

[7](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-19#fs-idp62005328-solution).

If the removal of trade barriers is so beneficial to international economic growth, why would a nation continue to restrict trade on some imported or exported products?