

## Trade Infographic Supplemental Activity Worksheet (Sample Answers)

There are two ways to approach comparative advantage and opportunity cost. One approach, the output-per-fixed-input approach, appears in the infographic about trade. The output-per-fixed-input approach focuses on the number of products that an individual, business, or country can produce given a fixed amount of resources.

The alternate approach to calculating comparative advantage and opportunity cost is the input-per-fixed-output approach, which this supplemental activity uses. This example uses the amount of time it will take to produce a single unit of output.

The following chart provides hours it takes each country to produce one unit of output:

Input (labor hour) per item		
Country	Chocolate bar	Chocolate cake
A	20	4
B	10	5

To determine the country with the absolute advantage, use the chart above to identify the country which uses the least number of labor hours to produce one unit of output. Write the country with the absolute advantage in the blanks below:

Country with the absolute advantage in chocolate bars: Country B

Country with the absolute advantage in chocolate cakes: Country A

Now calculate the opportunity cost of producing a single chocolate bar and a single chocolate cake for countries A and B. Calculate this number for chocolate bars for each country by placing the number of hours it takes to produce a unit of chocolate bars (the numerator) over the amount of hours it takes to produce a unit of chocolate cake (the denominator). This fraction is the opportunity cost for each country when it produces a unit of chocolate bars.

Repeat this process for chocolate cake by placing the number of hours it takes to produce a unit of chocolate cake (the numerator) over the number of hours it takes to produce a unit of chocolate bars. This fraction is the opportunity cost for each country when it produces a unit of chocolate cake. Show your work below.

### Country A

- $20 \text{ hours per chocolate bar} / 4 \text{ hours per chocolate Cake} = 5$
- $4 \text{ hours per Chocolate Cake} / 20 \text{ hours per chocolate bar} = 1/5$

### Country B

- $10 \text{ hours per chocolate bar} / 5 \text{ hours per chocolate Cake} = 2$

- *5 hours per chocolate cake / 10 hours per chocolate bar = 1/2*

Opportunity cost		
Country	Chocolate bar	Chocolate cake
A	<b>5</b>	<b>1/5</b>
B	<b>2</b>	<b>1/2</b>

Now that you have the opportunity cost, identify which country has the lowest opportunity cost for producing each good. The country with the lowest opportunity cost has the comparative advantage. Given this information you calculated in the table above, which country has the comparative advantage for a chocolate bar? What about a Chocolate Cake?

- ***Chocolate bars: Country B has the comparative advantage.***
- ***Chocolate Cakes: Country A has the comparative advantage.***

Why did the comparative advantage come out differently when using inputs (the table calculation) than with the outputs (on the infographic)?

- ***The calculations are done differently.***

What does this mean in terms of trade decisions that each country should make?

- ***If a country is considering outputs, then the country should use the results on the infographic. But if the country is considering inputs in its production decision, then it should use the data in the worksheet.***

How would each country benefit from specialization?

- ***Each country would more effectively use productive resources to produce goods and services.***