## Markefing Madness Bottled Water



Name: $\qquad$

You are a Marketing Analyst for a large bottled water company in the United States and you are trying to decide which countries to expand into with your product.

## Which countries consume the most Bottled water? <br> LEVEL 1

Look at the amount of bottled water that people consume in the United States and 10 countries you are considering.

1. Complete the table, showing scientific notation rounded to two decimal places. The first one is done for you.

| Country | Gallons of Bottled Water <br> Consumed <br> Annually | Gallons of Bottled Water Consumed <br> Annually <br> (Scientific Notation) |
| :---: | :---: | :---: |
| United States | $9,107,300,000$ | $9.11 \times 10^{9}$ |
| Indonesia | $3,760,600,000$ | $2.27 \times 10^{8}$ |
| Hungary |  | $7.69 \times 10^{9}$ |
| China | $2,954,200,000$ |  |
| Germany | $3,034,700,000$ | $7.52 \times 10^{9}$ |
| Italy | $1,514,600,000$ |  |
| Mexico | $3,118,800,000$ | $1.20 \times 10^{8}$ |
| Spain |  |  |
| Thailand | $4,500,900,000$ |  |
| Croatia |  |  |
| Brazil |  |  |

2. Which country outside of the United States consumes the most bottled water? How do you know?
3. Which country outside of the United States consumes the least bottled water? How do you know?
4. Approximately how many more times is the bottled water consumption of the United States per year compared to the countries above? Choose three countries and show how you know for each.

## Marketing Madness Bottled Water

## LEVEL 2

To better compare the consumption of bottled water in each country, you must look at how much bottled water is consumed per capita in each country.
5. Complete the table below. If the Per Capita Consumption is not in gallons, be sure to convert it first. The first one is done for you.

| Country | Gallons of Bottled Water <br> Consumed Yearly In <br> Scientific Notation <br> (From Page 1) | Population | Per Capita <br> Consumption <br> (Amount Per Person) |
| :---: | :---: | :---: | :---: |
| United States | $9.11 \times 10^{9}$ | $318,161,000$ | 28.62481574 gallons |
| Indonesia |  | $247,424,598$ |  |
| Hungary |  | $9,879,000$ | 23 gallons |
| China |  | $1,364,840,000$ |  |
| Germany |  | $80,716,000$ |  |
| Italy |  | $46,609,700$ |  |
| Mexico |  | $4,290,612$ |  |
| Spain |  |  | 50.55983265 gallons |
| Thailand |  |  | 22.20911872 gallons |
| Croatia |  |  |  |
| Brazil |  |  |  |

6. a. Which country consumes the most bottled water per capita? How do you know?
b. Which country consumes the least amount of bottled water per capita? How do you know?
7. Choose three countries and compare the bottled water consumption of each to the United States. What do you notice?
8. As the marketing analyst, which of the 10 countries do you think that your company should expand into? Why?

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## Challenge

In the United States about 25 million gallons of bottled water are consumed per day, or a little less than 300 ml (a small bottle) per day, per person.

1. Choose 5 of the countries (including the country with the least consumption) and determine how much bottled water is consumed by each country per day, and how much is consumed per person per day. Please express your answer in scientific notation.
2. What is the advantage of looking at the amount consumed per person per day instead of the total amount of bottled water?
3. What does this number tell us about how much bottled water people consume? Do all people drink the same amount, or do some drink more and some less? Discuss how bottled water consumption might vary per person.

## Marketing Madness Bottled Water

## Finale

1. Choose two of the countries that you have data for and prepare a report to the Chief Executive of your bottled water company explaining why you think the data supports you expanding into those two countries.
2. On a separate sheet of paper please discuss how the consumption of bottled water changed over time; either world-wide or in the United States? Conduct further research to see how the consumption of bottled water has changed over the past 10 to 100 years. Prepare a line graph or other visual representation to display your results on graph paper, Please reference this graph and data in your write-up and discussion.
