



Math Around the World – Exploration 1



DIRECTIONS: Use the first hand artifacts found in the room or on the web to explore a few ways that math is found all over the world. You may work with one peer. Be prepared to discuss your findings with the larger group. You may use a calculator as needed.

A. Mathematical Language Around the World

List all the mathematical words you can use to describe the photographs I have taken from all over the world. Briefly describe the photo as you list the word.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

B. Amsterdam Street Watching

1. Watch the minute long video clip and record how many of the following you see:

Bicycles _____ Cars _____

Walkers/Runners _____ Motorcycles _____

2. Which mode of transportation occurred most often? How many occurrences?

3. If you watched the street for an hour about how many of each mode of transportation could you expect to see?

Bicycles _____ Cars _____

Walkers/Runners _____ Motorcycles _____

Show your math or explain your reasoning.

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C. Buying Music Abroad

The current exchange rate from U.S. dollars to Euro is \$1.41 U.S. dollar for every \$1 Euro. Find the cost of the following items in U.S. dollars.

1. Michael Jackson, King of Pop \$ _____ x $\frac{\text{_____}}{\text{Euros}}$ = \$ _____
exchange rate *U.S.*

2. Spongebob CD \$ _____ x $\frac{\text{_____}}{\text{Euros}}$ = \$ _____
exchange rate *U.S.*

3. Michael Jackson, The Collection \$ _____ x $\frac{\text{_____}}{\text{Euros}}$ = \$ _____
exchange rate *U.S.*

4. ** If there are 5 Discs in Michael Jackson’s The Collection, about how many U.S. dollars is each? _____ Euros? _____

To check your answers: <http://www.x-rates.com/calculator.html>

D. Wetter - Weather

This weather map was found in a German newspaper, where degrees Celsius is used to measure temperature. Convert each of the high and low temperature using the following formula: $f = 9/5c + 32$.

Shortcut: Multiply degrees Celsius by 1.8, then add 32. Why does this work?

1. HIGH: _____ degrees C x _____ + _____ = _____ degrees F
 LOW: _____ degrees C x _____ + _____ = _____ degrees F

2. HIGH: _____ degrees C x _____ + _____ = _____ degrees F
 LOW: _____ degrees C x _____ + _____ = _____ degrees F

3. HIGH: _____ degrees C x _____ + _____ = _____ degrees F
 LOW: _____ degrees C x _____ + _____ = _____ degrees F

4. HIGH: _____ degrees C x _____ + _____ = _____ degrees F
 LOW: _____ degrees C x _____ + _____ = _____ degrees F

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5. HIGH: _____ degrees C x _____ + _____ = _____ degrees F
LOW: _____ degrees C x _____ + _____ = _____ degrees F
6. Which location is the warmest? _____ coldest? _____
7. Which location has the largest RANGE in temperature? _____
8. * What do you think the word, “abnehmend” means? Why?

To check your answers:

<http://www.calculateme.com/cTemperature/CelsiusToFahrenheit.htm>

E. Reading a Map

This is the map that my sister and I used to plan our routes along our journey abroad. Use the information found in the Legend at the top left corner of the map AND a ruler to investigate with distances abroad.

1. *About* how far is it from Berlin, Germany to Prague, Czech Republic?
km _____ miles _____
2. If we took a high-speed train traveling 60 mph how long did it take to get from Berlin to Prague? Show your work.
3. About how many miles is the shortest route from Berlin, Germany to Amsterdam, Netherlands? Describe the route.
km _____ miles _____
4. Calculate the total east/west distance that we traveled (Dublin to Krakow).
km _____ miles _____
5. Calculate the total north/south distance that we traveled (Lausanne to Dublin).
km _____ miles _____

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Time to RELECT!

1. Which mathematical exploration was the most difficult for you? Why?
2. What did you do to overcome these difficulties? Did it work?
3. Which exploration was the most interesting to you?
4. What is one new interesting fact that you learned today?
5. What do you hope to learn more about in the future?
6. Which type of exploration would you MOST like to investigate further with?
7. Which type of exploration would you LEAST like to investigate further with?