**GEO 101**
**EARTH SCIENCE**

# LATITUDE & LONGITUDE
# LAB EXERCISE

(5 points)

Directions: Refer to the Latitude / Longitude website.

Click on the State of Colorado link. It might take a moment to load. On this map of Colorado, there are lines of latitude and longitude marked in increments of one degree (blue lines).

How many degrees wide is Colorado (degrees of longitude)?
Count the spaces, not the lines. This should be a whole number.

_____

How many degrees tall is Colorado (degrees of latitude)?
Count the spaces, not the lines. This should be a whole number.

_____

Go back to the lab exercise page and click on the State of Wyoming.

How many degrees wide is Wyoming (degrees of longitude)?
Count the spaces, not the lines. Longitude lines are offset equally on the east and west side of the state, so your answer should still be a whole number.

_____

How many degrees tall is Wyoming (degrees of latitude)?
Count the spaces, not the lines. This should be a whole number.

_____

Based on these latitude and longitude figures, the two states cover the same area, right? (go back and check again if your numbers above are not the same for each state).

Now, go back to the lab exercise and click on Colorado Geography Statistics.

What is the Total Area of Colorado? Be sure to scroll down to where it says "Total Area".

_____

Go back to the lab exercise and click on Wyoming Geography Statistics.

What is the Total Area of Wyoming? Be sure to scroll down to where it says "Total Area".

_____

Why do they have different areas? It has nothing to do with mountains or lakes or elevation. Take a look at the Helpful Hint Diagrams and think about the longitude lines as they approach the poles. The space between the longitude lines is not always constant. Also, take a look at the USA map at the link provided and note the position of Wyoming vs. Colorado. Why do they have different areas?

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Go back to the lab exercise page and click on the State of Utah.
Utah has a chunk taken out of its northeast corner. How big is that chunk of land. You should be looking at the red shaded area on the map with the X. Do not give the dimensions of the entire state—just the red shaded area. This is the "missing chuck" (it's not really missing, it just belongs to the next state over). Your answer should be whole numbers.

_____ degrees wide (degrees of longitude)  _____ degrees tall (degrees of latitude)

Go back to the lab exercise page and click on the State of Nebraska.
Nebraska has a chunk taken out of its southwest corner. How big is that chunk of land. Again, you should be looking at the red shaded area on the map with the X. Do not give the dimensions of the entire state—just the red shaded area. Your answer should be whole numbers.

_____ degrees wide (degrees of longitude)  _____ degrees tall (degrees of latitude)

Which "chunk" of land is bigger (circle one).

Utah's  OR  Nebraska's

Why? _____

**Go to next page --- >>>**

List ten U.S. states (besides Colorado, Wyoming, Utah and Nebraska) that have a boundary that falls right on a whole-number latitude or longitude line. Just because it is a straight line running east-west or north-south does not mean that it is a whole-number latitude or longitude line. Take a look at the state maps and verify each of the states that you list below.

Google the following on Google Images:

“hawaii map latitude longitude lines”

Obviously, Hawaii does not have any boundaries based on latitude and longitude, but you can substitute different states in your search. Typically, the first image shown will be a good one to use for analysis.

List your ten states below:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____