Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_

Latitude and Longitude Lab

In order to determine a location using Earth’s Coordinate system you must know how to read and interpret the lines of latitude and Longitude. Each degree of latitude or longitude is equal to 60 minutes . Halfway between two lines would be 30 minutes. For example, a location between a latitude that is halfway between 42o N and 43o N would be 42o 30’ N. Remember that the latitude coordinates always comes before the Longitude coordinates.

Objective:

* To determine locations in New York State using the coordinate system of latitude and longitude.
* To become familiar with using page 2 of the ESRT.

You should have a copy of page 3 Generalized Bedrock Geology of New York State Map from the Earth Science Reference Tables.

1. On the Map using a red pencil and a ruler connect with a straight horizontal line each value of Latitude starting with 41-degree and end at the 45-degree value.
2. This is a bit more difficult.

With a horizontal DASHED line connect the 30-minute lines of latitude between the whole latitudes lines you drew in step 1. There are marks on the map represented with a small dash (-) or a Plus (+) sign to the left or right side of the map.

1. Using an Orange Pencil connect lines of longitude using a ruler vertically starting at 73 degrees and ending with 79 degrees.
2. As above, connect the 30-minute marks for longitude with a vertical dashed line in between the longitude lines drawn
3. All of the degrees are already labeled on the map. On the right side of your map label the 30-minute marks between the lines of latitude. Ex. it should look like this 42o 30’ N.
4. With a blue pencil lightly trace over the Niagara, Genesee, Delaware, Susquehanna Hudson, Mohawk St. Lawrence rivers. Also, lightly color lakes Erie, Ontario, Champlain, all the finger lakes and Long Island Sound.

Part A. Latitudes and Longitude

For the following Locations please list the Latitude and Longitude to the nearest 5 minutes.

|  |  |  |
| --- | --- | --- |
| Location | Latitude | Longitude |
| Slide Mountain |  |  |
| Watertown |  |  |
| Riverhead (Long Island) |  |  |

Part B. Measuring distances

Using the scale distance at the bottom right of the map please measure the distances between the cities in miles and kilometers. Use a separate sheet of paper to mark off distances.

|  |  |  |
| --- | --- | --- |
| Cities of New York | Distance in km | Distance in Miles |
| Buffalo and Niagara Falls |  |  |
| Old Forge and Albany |  |  |
| Ithaca to Massena |  |  |
| Buffalo to Rochester |  |  |

Part C. Answer the following:

What is the elevation of Lake Ontario \_\_\_\_\_m

Name the seven rivers that appear on the map (no specific order)

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name two cites that are close to the same line of latitude as Elmira.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name a city close to the same line of latitude as Utica. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name the city located close to the same longitude as Ithaca \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name the two mountains found on the map

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What city is close to the same Longitude as Old Forge \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Please staple map to this sheet and turn in when completed.**