Purpose: Maps are produced for many purposes. Draw a map in the space below that would take a friend from your home town to Ithaca, NY.

Now draw a map that would take a friend from Olin Library to Mann Library.
**Scale:** Maps are produced at various scales, often depending upon their purpose. Many topographic maps used in geology are drawn at 1:24,000 scale. In this scale one inch on the map equals how many feet on the ground? ____________.

Dollhouses are often built at 1:12 scale. In this scale, one inch equals one ________________.

Fashion designers often work at 1:1 scale. In this way, their clothes can be worn by real people. In this scale, one inch equals one ____________.

**Coordinates:** Some street maps use letters and numbers along the edges of the map to help users locate a particular business or intersection. Topographic maps use latitude and longitude. The latitude and longitude of Ithaca, NY, are: ________________________________.

**Constructing a profile:** Topographic maps display the world as if seen from directly above. People often like to see the world from ground level. It is possible to provide a more human view from a topo map by constructing a profile.

- place the edge of a sheet of paper along a line connecting two points on a topo.
- mark the paper exactly where each contour line intersects the sheet of paper.
- label the elevations of the contour lines.
- make a vertical scale of horizontal lines and label them with corresponding elevations.
- project the points from the sheet of paper to the horizontal lines.
- connect the points.

Construct a profile for the line that begins at the peak of Turkey Hill, proceeds through the 1286 ft. mark on Hungerford Hill, and ends near the 852 ft. marker near the intersection of Rt. 79 and Pine Tree Road. Use the attached copy of the Ithaca East topo sheet and the graph paper.

Once your profile is complete, sketch an extension 4,000 ft to the southwest, crossing the gorge.
Consider the attached map (labeled GEOMORPHOLOGY CORNELL UNIVERSITY) of the area surrounding Cayuta Lake (located to the southwest of Ithaca. It was based on the 1893 survey. Compare this map with the current topo sheet of this area. Record 4 differences between the two maps.

1) 

2) 

3) 

4) 

Consider the large topo maps of the Cayuga Lake basin.

What is the elevation of the water surface in Cayuga Lake?_________________________

What is the elevation of the bottom of Cayuga Lake?_________________________

What is the elevation of Day Hall, Cornell University?_________________________

What is the elevation of Ford Hall, Ithaca College?_________________________

What is the highest elevation in this area?_________________________

Which direction does Cayuga Lake flow?_________________________

What is the elevation of the northern end of Seneca Lake?_________________________

Find the marsh at about the 1500 ft. level on Snyder Hill. What is unusual about the contour line around the marsh? What does this indicate?_________________________

This part of New York State is underlain by layers of salt. Some people believe that tunnels in the salt layers connect the lakes. Therefore, it is argued, people who drown in Cayuga Lake occasionally wash up on the beach on Seneca Lake. Can you provide any evidence from the topo map that would either support or discredit this idea?

**Time Scales:** Arrange in correct order the following:

dinosaurs
the Erie Canal
the saber toothed tiger
trilobites
first humans
the Revolutionary War