Name_____________________________________

Topographic Maps Worksheet

1. With the aid of a topographic map, determine the latitude and longitude of Heartland Community College as accurately (to the nearest second) as you can.

2. What are the latitude and longitude coordinates of the following cities in North America (to the nearest minute).
   Mexico City, Mexico ______________________________
   Nome, Alaska _________________________________
   St. Louis, Missouri ______________________________
   Boise, Idaho _________________________________
   Quebec City, Canada ______________________________
   New York, New York ______________________________
   Miami, Florida ________________________________
   Los Angeles, California __________________________
   Tucson, Arizona ________________________________

3. Now, do the same for:
   Brussels, Belgium ______________________________
   Jahkarta, Indonesia ______________________________
   Aberdeen, Scotland ______________________________
   Baghdad, Iraq _________________________________
   Nagasaki, Japan ________________________________
   Nairobi, Kenya _________________________________
   Buenos Aires, Argentina _________________________

4. Which is farther north: London, England or Ottawa, Canada? By how many degrees of latitude? What about Barcelona, Spain and Atlanta, Georgia?

Maps I: Bloomington East Quadrangle
1. What is the compass orientation of Bloomington-Normal Airport’s longest runway?

2. What is the name of the quadrangle directly to the south of this quadrangle?

3. What is the most apparent feature located in SE1/4, SE1/4, SEC 36, T24N, R2E?

4. What is the contour interval of this map?

5. What is the elevation of Heartland Community College?

6. What is the symbol for an intermittent stream?

7. What is the highest elevation that occurs in SEC 8, T23N, R3E?

8. What is the public land survey coordinates for Brokaw Hospital?

9. What is the scale of this map?

10. What is the name of the creek that runs through south Normal?
Maps I: Isolation Peak Quadrangle

1. What is the name of the quadrangle to the southeast of Isolation Peak quadrangle?

2. What is the elevation of Hiamovi Mountain?

3. Which would be the easier climb, going up the northeast face or the southwest face of Hiamovi Mountain?

4. Look for evidence along the continental divide. It is much steeper and more rugged east of the continental divide compared to the west of the divide. Why?

5. How far is it from Lone Pine Lake to Spirit Lake?

6. You must leave the patrol cabin and go to rescue a hiker on Tanimax Peak. What will be your vertical change of elevation?

7. Which way does Paradise Creek flow, toward the north or the south?

8. Who publishes this map?

9. Was this map ever field checked? If so, when?

10. What is the elevation of Isolation Peak?
Contour Map Profile

A contour map profile illustrates the topography as it would appear from a point on the earth’s surface. Using the contour map below, construct a contour profile of the graph provided.

Place the straight edge of a piece of paper along the profile line (AB) on the map. On the edge of the paper mark the positions of the two ends of the line, and note their elevations. Then make a mark every time the profile line crosses a contour line, also noting the elevation. Lay the paper along the bottom of the grid. Directly above each mark, place a dot at the proper elevation. Then connect the dots in a smooth curved earth-like line.
Emerald Island

Connect the contour lines:

scale 1 inch = 1 mile  contour interval = 20 ft.
Earth Science Topographic Lab

Name:__________________________

1. For this part of the exercise, refer to the topographic map symbol key.

   A. Explain what the following colors indicate on a topographic map:

<table>
<thead>
<tr>
<th>COLOR</th>
<th>FEATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>________________________________</td>
</tr>
<tr>
<td>Blue</td>
<td>________________________________</td>
</tr>
<tr>
<td>Brown</td>
<td>________________________________</td>
</tr>
<tr>
<td>Green</td>
<td>________________________________</td>
</tr>
<tr>
<td>Red</td>
<td>________________________________</td>
</tr>
</tbody>
</table>

   B. What symbols are used for the following features?

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>SYMBOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravel beach</td>
<td>________________________________</td>
</tr>
<tr>
<td>Power transmission line</td>
<td>________________________________</td>
</tr>
<tr>
<td>Orchard</td>
<td>________________________________</td>
</tr>
<tr>
<td>Tunnel entrance</td>
<td>________________________________</td>
</tr>
<tr>
<td>Strip mine</td>
<td>________________________________</td>
</tr>
<tr>
<td>Dam with lock</td>
<td>________________________________</td>
</tr>
<tr>
<td>Railroad, single track</td>
<td>________________________________</td>
</tr>
</tbody>
</table>

2. The ability to read a topographic map requires the ability to visualize topographic features as they appear from above and as they appear from a point on a surface.

   A. What is the scale of a 7.5 minute quadrangle map.___________________________

   B. Would the same contour interval be appropriate for all areas of the United States?  Explain.

   __________________________________________________________________________
   __________________________________________________________________________

   C. Why are some contour lines darker than others? ________________________________
D. When looking at a topographic map, you notice an area where contour lines are very close together. What could you say about the slope of the area? ______________________

E. If the map you are working with has a scale of 1:62,500, explain what those numbers are representing. ________________________________

F. Do contours usually cross each other? Explain. ________________________________