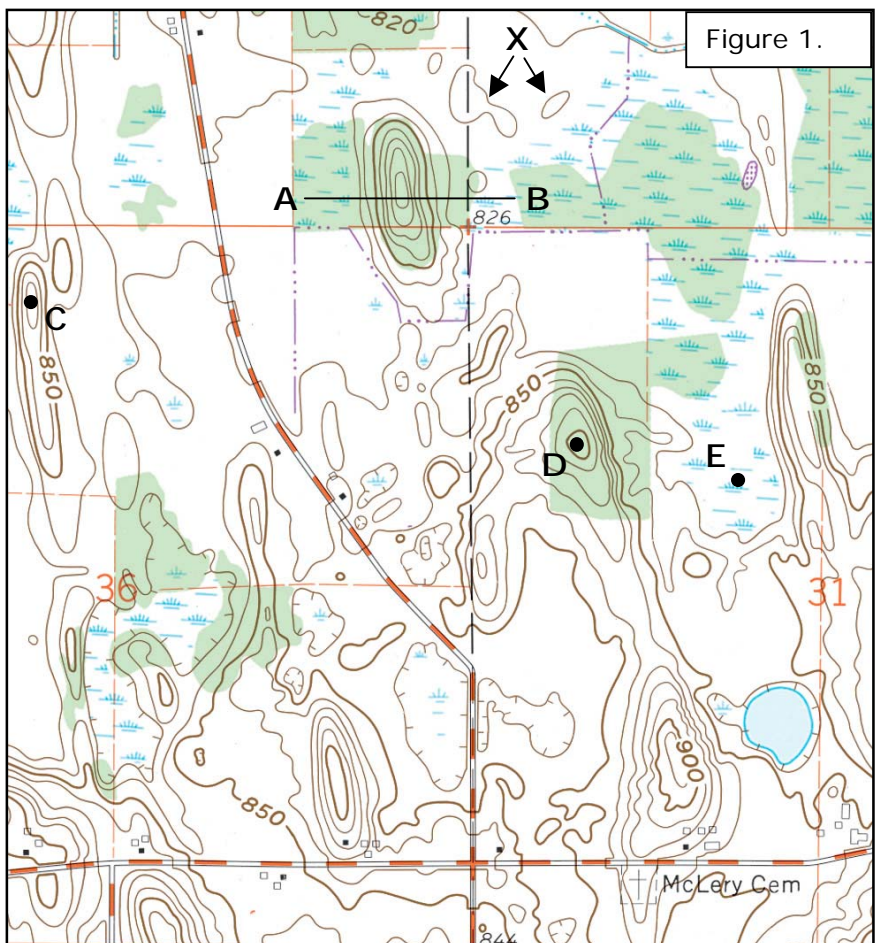


1. You have a topographic map with a scale of 1:100,000.
  - a. If you measure a distance of 1 inch between two points on the map, how many feet will this equal on the earth's surface?
  - b. If you measure a distance of 7 inches between two points on the map, how many miles will this equal on the earth's surface?
  - c. If you measure a distance of 3.8 inches between two points on the map, how many miles will this equal on the earth's surface?
2. You have a topographic map with a scale of 1:50,000.
  - a. If you measure a distance of 1 inch between two points on the map, how many feet will this equal on the earth's surface?
  - b. If you measure a distance of 5 inches between two points on the map, how many miles will this equal on the earth's surface?
  - c. If you measure a distance of 1.5 inches between two points on the map, how many miles will this equal on the earth's surface?
  - d. If you measure a distance of 15 centimeters between two points on the map, how many kilometers will this equal on the earth's surface?
3. What is the contour interval for the topographic map in Figure 1 (elevations are in feet)?

4. What would be the approximate shape of a profile drawn from point A to point B on the map in Figure 1?
5. What is a good estimate of the elevation of point C on the map in Figure 1?
6. What is a good estimate of the elevation of point D on the map in Figure 1?
7. What is a good estimate of the elevation of point E on the map in Figure 1?
8. What is the elevation of the contour lines labeled with an X?
9. If the map in Figure 1 has a scale of 1:50,000 and you want to draw a profile with a 10X vertical exaggeration, how many feet on the earth would one inch on the graph equal?



10. What is the elevation of points A and B on the map in Figure 2?
11. How many miles is it from point A to point B on the map in Figure 2?
12. What is the gradient from point A to point B on the map in Figure 2?
13. What is the gradient from point C to point D on the map in Figure 2?
14. What is the gradient from point E to point F on the map in Figure 2?
15. What is the gradient from point G to point H on the map in Figure 2?
16. Examine the contour line spacing between the points you just calculated the gradients for. What is the relationship between contour line spacing and gradient?
17. You want to draw a topographic profile along a line from A to H on the map in Figure 2. How many feet will one inch on the vertical axis equal if:
  - a. the vertical exaggeration is 5X?
  - b. the vertical exaggeration is 15X?
  - c. the vertical exaggeration is 25X?
18. Sketch a picture of what the approximate profile from A to H should look like.

