

Activity 2F: Constructing a Topographic Profile

1. Construct a topographic profile for the contour map below (**Figure 2.27**). Recall, a topographic profile allows you to visualize the vertical component of a landscape. To successfully draw a topographic profile, remember to follow these simple steps,

To successfully draw a topographic profile, follow these simple steps or visit [How do I construct a Topographic Profile?](#) for additional help.

1. Locate a line on a map that is interesting. In many cases, this line is given to you (often labeled A-A' or A-B). Grab a piece of blank paper and place the edge along this line. Mark the starting and ending points of the line. Be sure you label them appropriately, as A and A', or A and B, or however the original line on the map is identified.
2. Start at one end, for example the A end, and move along the edge of the paper, making a mark on the paper every time a contour line touches the edge of the paper. Make sure you label each mark with the right elevation so that you can transfer that point to the correct elevation on your profile. It is important to write neatly to ensure they can be read during a later step. Note the highest and lowest elevation.
3. Use a piece of graph paper (or horizontally lined paper) that is at least as long as your profile line. If needed, tape paper together to a long enough sheet; make sure the grid lines line up.
4. On the graph paper, draw a horizontal line the length of the profile line. Draw vertical lines above your starting and ending points. Label the y-axis (vertical lines) with elevation. It is important to consider the scale, use the noted highest and lowest elevations from previous. For example, if the lowest elevation is 7,200 feet and the highest is 10,600 feet, you'd likely want to label your axis from 7,000 to 11,000 feet.
5. Line up your original tick marked paper with the line drawn on your graph paper. Beginning with the elevation on the left-hand side of the paper, go directly up from that tick mark to make a small dot at the corresponding elevation. Note that the point does not need to be on a vertical line on the graph paper.
6. Once you have transferred all of your tick marks to your graph paper, connect the dots using a smooth curve. When connecting dots, recall you are interpreting the land surface between contour lines and therefore want smooth and consistent lines, and not straight lines. If you compare your profile with a fellow classmate, you may notice slight differences; overall, however, they should be a similar shape.

Name: _____

Activity 2F

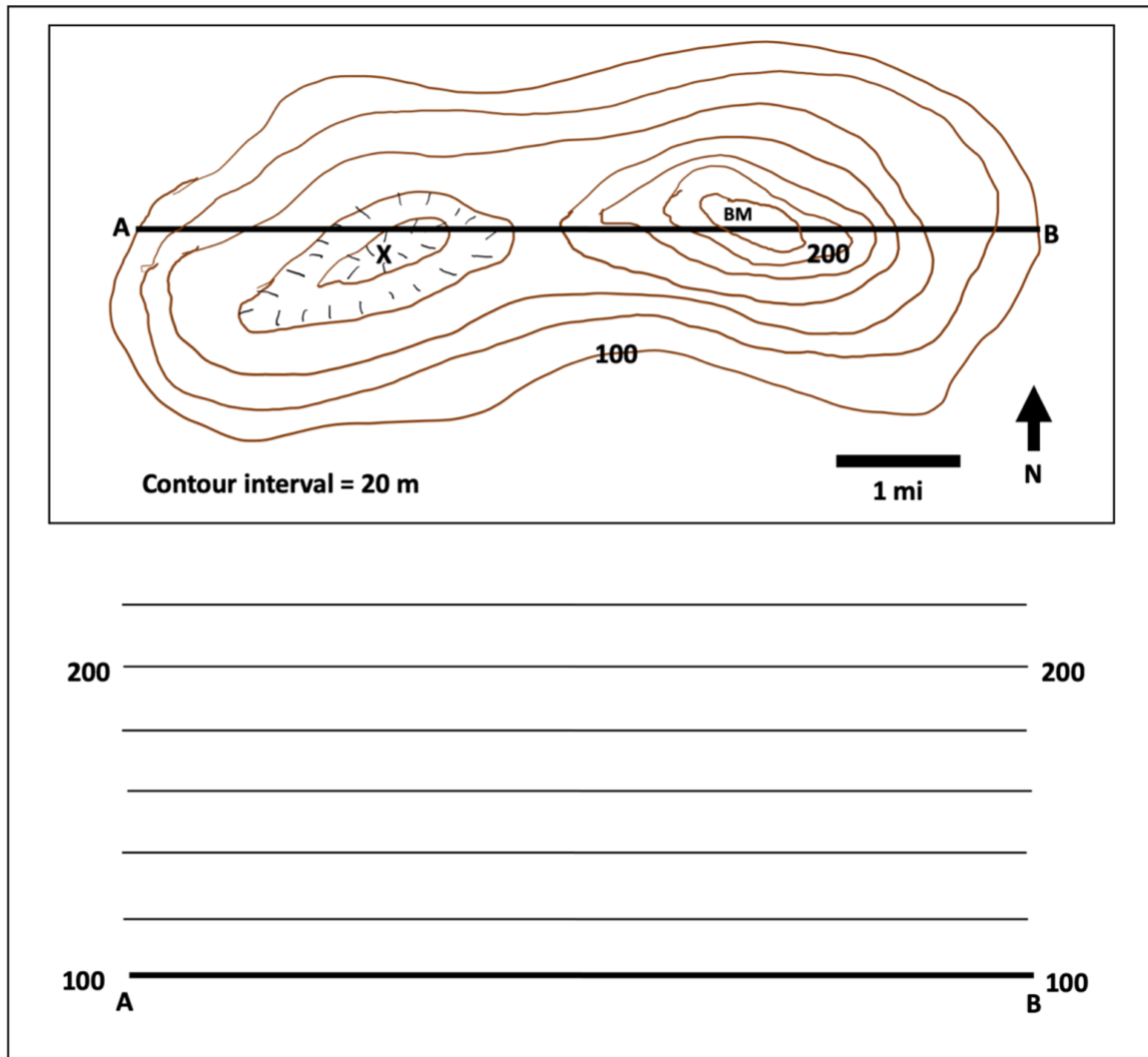


Figure 2.27: Topographic map and profile. (CC-BY 4.0; Chloe Branciforte, own work)

2. Using the Rule of Halves, [interpolate](#) (estimate an unknown value from neighboring known values) the elevation of:
 - a. **Benchmark BM:**
 - b. **Benchmark X:**
3. What is the **total relief** (highest elevation - lowest elevation) of this map?