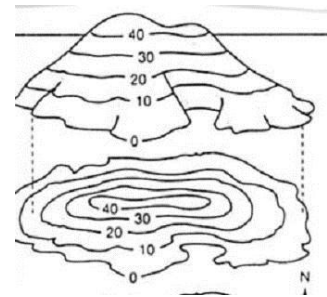


TOPOGRAPHIC MAP LAB ACTIVITY

A topographic map shows the topography or shape of the land. To show topography, we use contour lines. Contours are imaginary lines that join points of equal elevation on the surface of the land above or below a reference surface, such as mean sea level. Contours make it possible to measure the height of mountains, depths of the ocean bottom, and steepness of slopes.



Purpose: To learn how to read, analyze, and create topographic maps

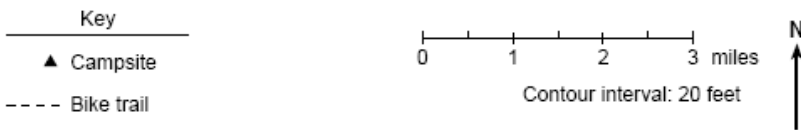
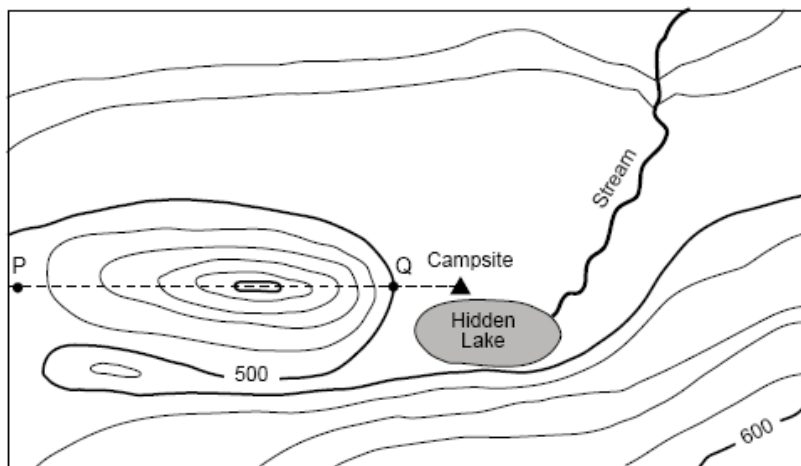
Vocabulary

Topographic Map -

Contour Line -

Contour Interval -

Profile -



Part 1: Map basics

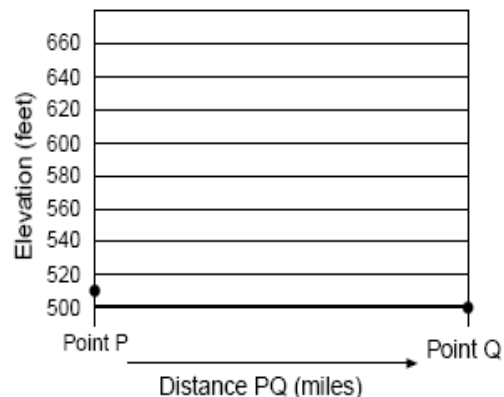
- 1) What is the contour interval on this map ?

- 2) What is the elevation at point Q ? _____
- 3) What do the circles on the left side of the map indicate? _____
- 4) What do the contour lines do as they cross over a stream? _____
- 5) In which direction is the Stream flowing?
To the north or south?? _____
- 6) What is the elevation of the campsite and lake? Is it flat or steep there? _____

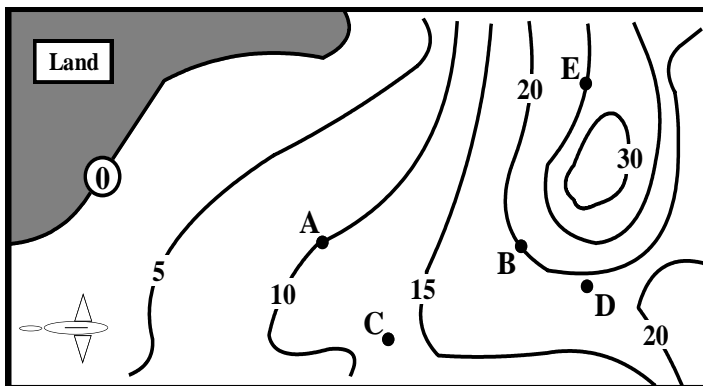
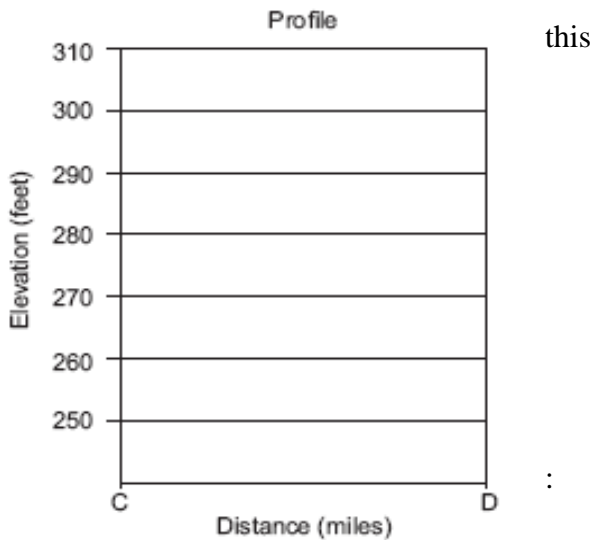
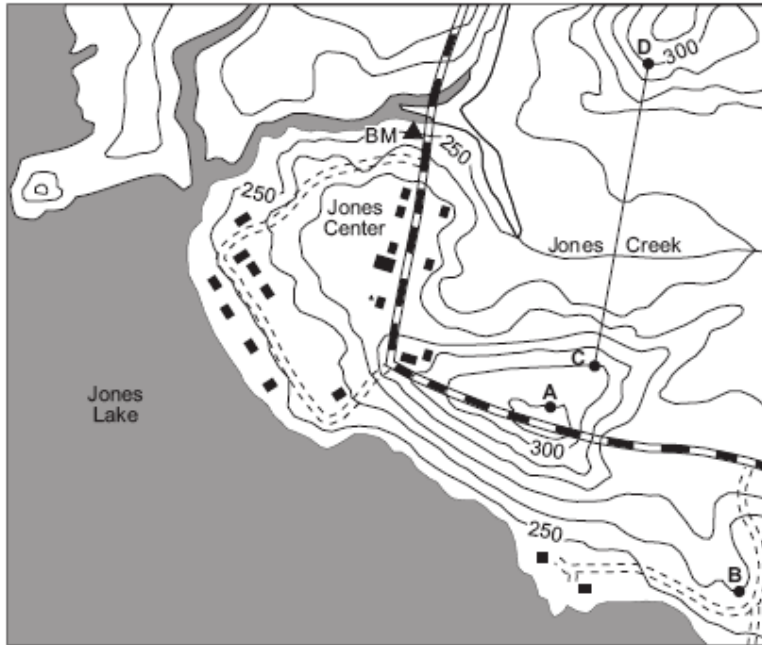
- 7) What is the elevation at the top of the hill???
- 8) If you do decided to walk from point to P to point Q, what sort of topography would you encounter?

- 9) If you do decided to walk from point to P to point Q, how much elevation would you climb? _____
- 10) How many hills are located on this map? _____

11) On the grid below, draw a profile of the landscape along the bicycle trail from point P to point Q, connect the dots to complete the profile. Make sure to include the hilltop in your profile.



Elevations are in feet.



- 10) What is the contour interval on this map? _____
- 11) What is the elevation at point A?

- 12) What is the elevation at point B?

- 13) What is the elevation at point C?

- 14) What is the elevation at point D?

- 15) In which *direction* does Jones Creek flow? East or West??

- 16) What is the elevation of Jones Center? _____
- 17) How many hills are located on this map?? Be carefull!!!!
- 18) What is the elevation of Jones lake???
- 19) What is the elevation change from point A to the shoreline of Jones Lake? Is it steep or flat?
- 20) Make a profile from line C to line D using graph to the left:

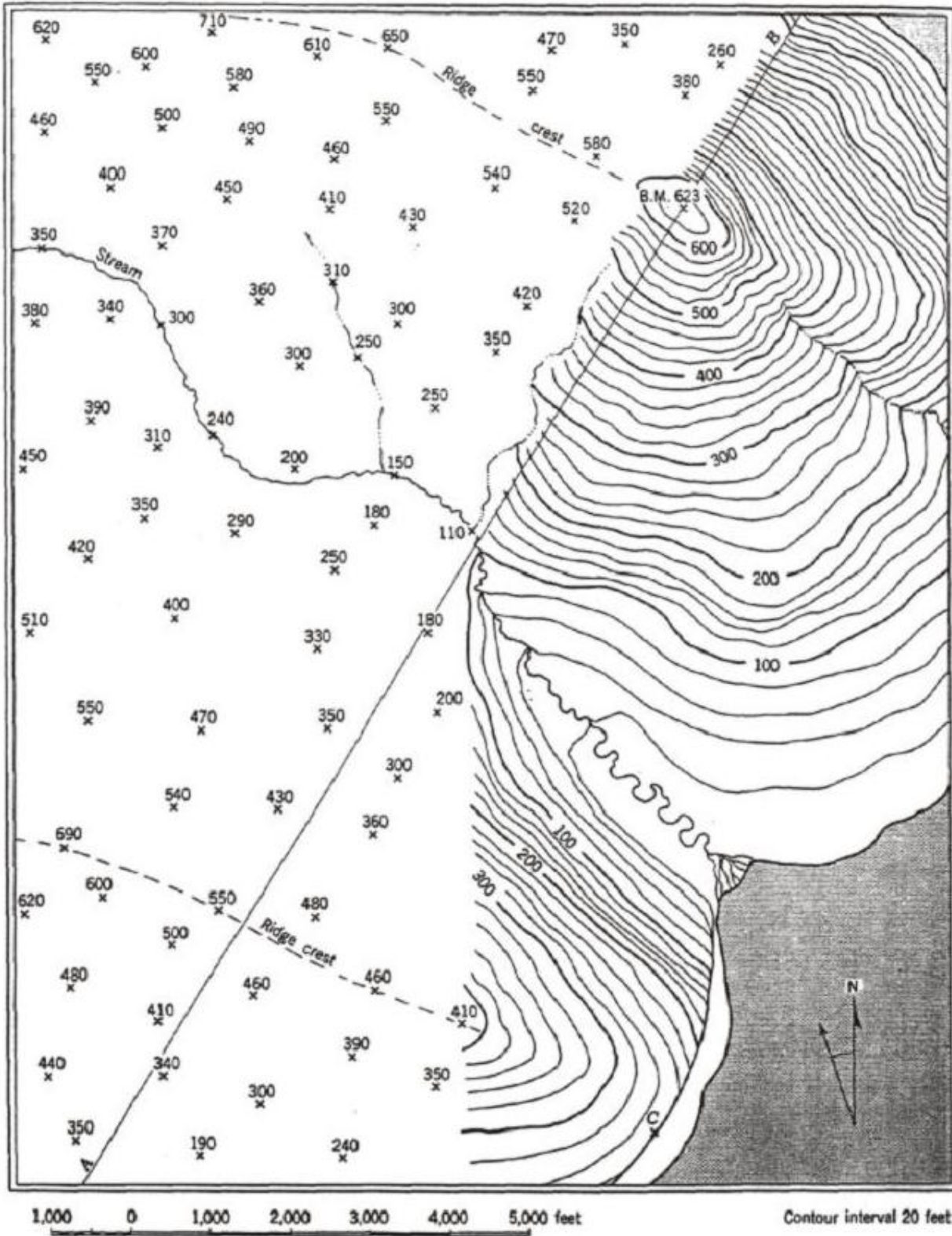
Use the above map to the left to answer the following questions:

1. What is the contour interval on the Map?
2. What is the elevation at point:
A: _____
B: _____
C: _____
D: _____
E: _____

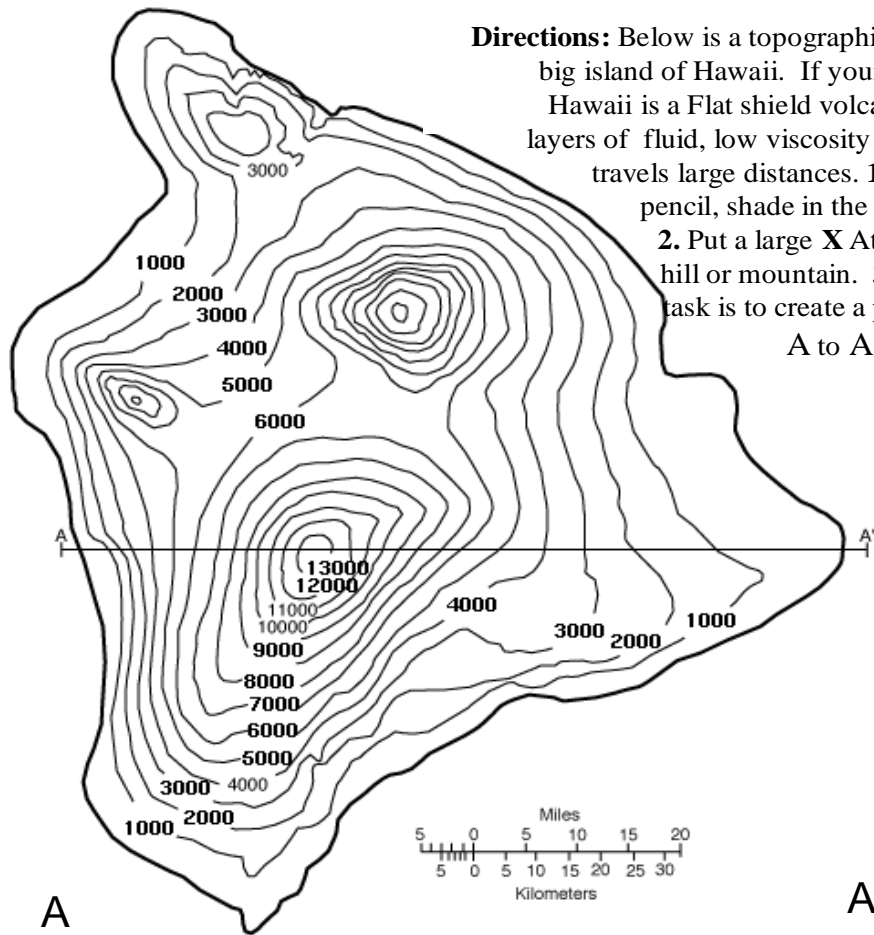
Part 2: Drawing Contour lines

Directions:

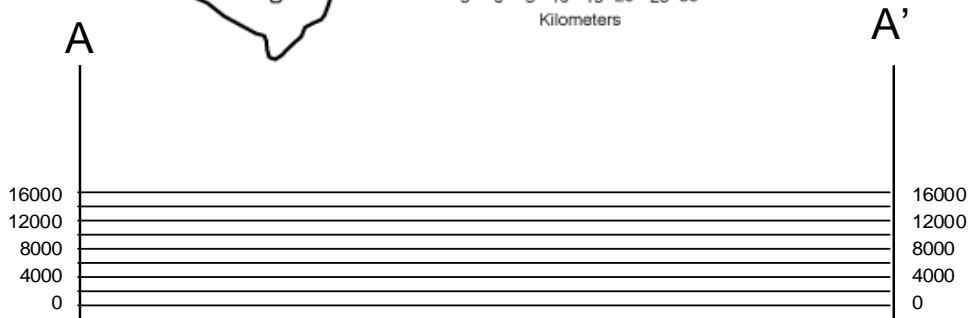
1. Using the bold contour lines (500, 400, 300, 200), and the different points of elevation; draw contour lines throughout the rest of the map to reveal the topography.
2. When you are finished drawing contour lines, shade in the areas with your pencil where the topography is steep (contour lines are close together)
3. Put an **X** on top of the hill (look for circles).
4. Draw and highlight "v's" where each contour line crosses the river



Part 3: Hawaii Profile



Directions: Below is a topographic map of the big island of Hawaii. If you remember, Hawaii is a Flat shield volcano made of layers of fluid, low viscosity magma that travels large distances. **1.** With your pencil, shade in the Steep areas. **2.** Put a large **X** At top of each hill or mountain. **3.** Your final task is to create a profile from A to A'. Good luck



Part 4: Review Questions

1. In your own words, explain how you were able to determine where steep areas on a topo map were:

2. In Part 1, how were you able to determine the contour interval from the first two maps?????

3. How were able to locate hills or mountains on a map?????

4. In part 3, how were able to draw contour lines?????

5. Look back at your maps from part 1. What did the contour lines do as they crossed a river???? Did they point upstream or downstream???????