

Name _____ Period _____

Title – Topography - The Art of Reading & Making Maps

Questions:

What is a Topographic Map?

- Shape of the Earth's _____ is shown by _____ lines
- Contour lines are lines _____ points of _____ elevation
- Contours make it possible to _____ the height of mountains, depths of the ocean bottom, and _____ of slopes
- _____ maps use colors, lines, symbols and contours to represent the lay of the _____

Reading Topographic Maps

- Contours are shown by _____ of different _____
- Contours _____ cross
- To help the user determine _____, index contours are _____
- _____ values are printed in several places _____ these lines
- Narrower intermediate & supplementary _____ found between the index contours help to show more _____ of the land surface shape

Reading Topographic Maps

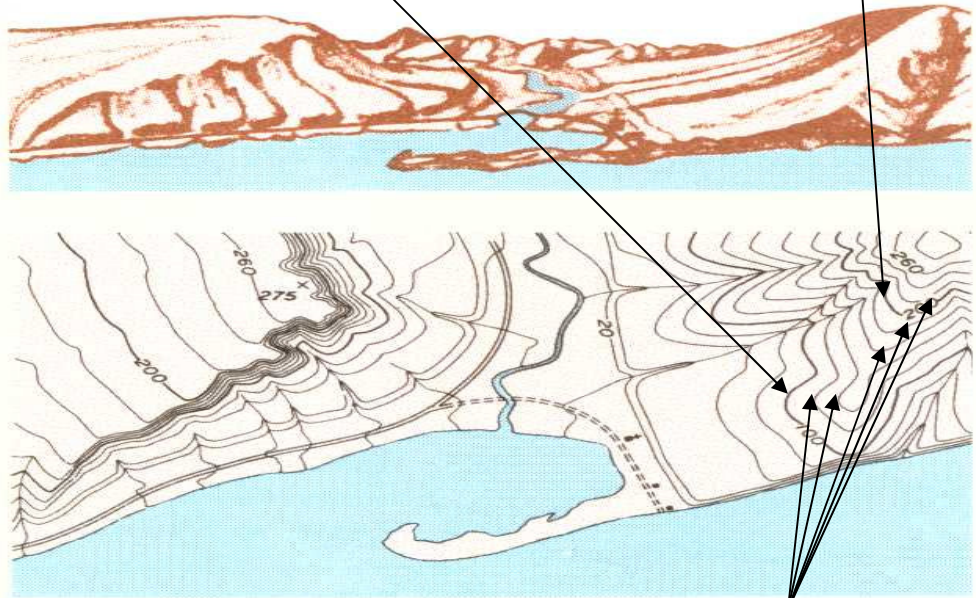
- _____ that are very close together _____ steep slopes
- _____ spaced contours, or an absence of contours, means that the ground slope is relatively _____
- The _____ difference between _____ contour lines is called the **contour interval**

Summary:

Questions:

Index Contour (Elevation = _____')

Index Contour (Elevation = _____')



Every 5 lines: $(200-100)/5 = 20'$

Therefore, contour interval = _____'

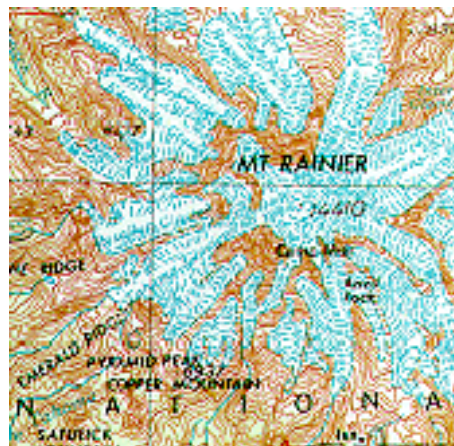
Chart Scale - Larger is Smaller!

- Map _____ is the relationship between distance on the _____ and distance on the _____. If, for instance, 1 inch on the map represents 1 mile (which converts to _____ inches) on the ground, the map's scale is 1:63,360.
- It is given as a _____ or ratio; 1:250,000 or 1:10,000 (all inches)

Chart Scale - Larger is Smaller!

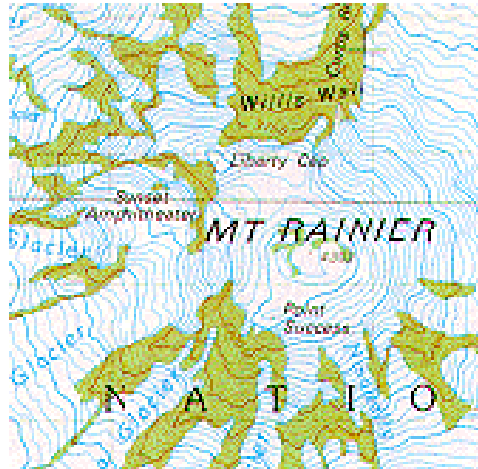
- One _____ on a 1:63,360 scale map represents 63,360 inches on the _____ (or one inch on the map equals one _____ on the ground when converted)
- Map of an area 100 miles long by 100 miles wide drawn at a scale of 1:63,360 would be more than _____ feet square -- not very convenient. To make the map a more _____ size, either the scale or the area covered must be _____

Common Scales used by USGS



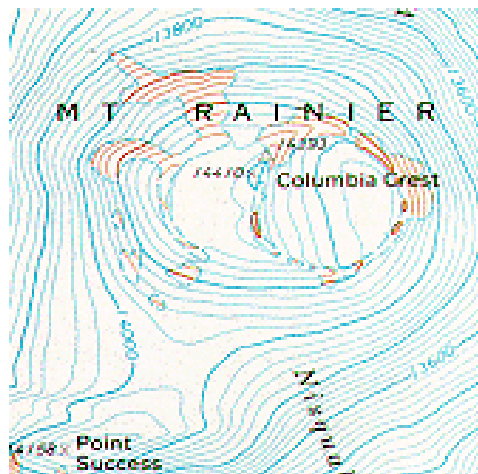
- 1:250,000 scale
- 1 _____ represents about 4 miles (larger scale ratio views _____ area)

Common Scales used by USGS



- 1:100,000 scale
- 1 inch represents about _____ miles
(smaller scale ratio views _____ area)

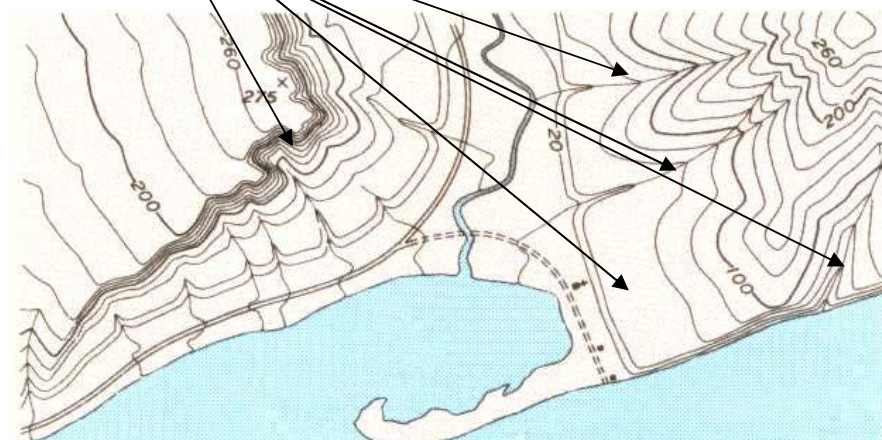
Common Scales used by USGS



- 1:24,000 scale
- 1 inch represents about _____ feet (~ 1/3 of a mile (smaller scale ratio views _____ area)

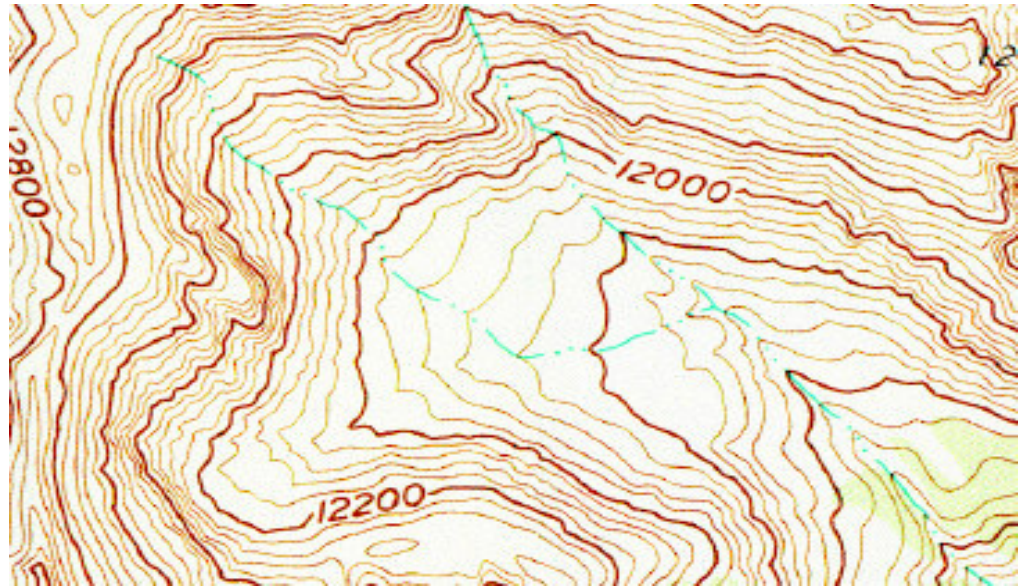
What Does It All Mean?

- The more contour lines packed _____ together represent steep, cliff-like areas.
- The more two contour lines are spread _____, the flatter the area.
- Contour lines that form a _____ shape show where water has cut a path (valley)



Questions:

What is the contour interval?



$$12,200' - 12,000' = \underline{\hspace{2cm}}'$$

 lines between index lines

$$200' / 5 \text{ lines} = \underline{\hspace{2cm}}' \text{ per line}$$

$$\underline{\hspace{2cm}} \text{ } \underline{\hspace{2cm}} = 40 \text{ ft}$$

Remember...

- Topographic maps can help you find , Trails, and Places to climb
- Each contour lines represents the elevation everywhere on the line
- The 'Contour Interval' is the elevation distance between two lines
- Scales are usually shown in or centimeters
- 1:63,360 means inch on the map = 63,360 inches on the ground (63,360 ÷ 12 = 5280 feet = 1 mile)