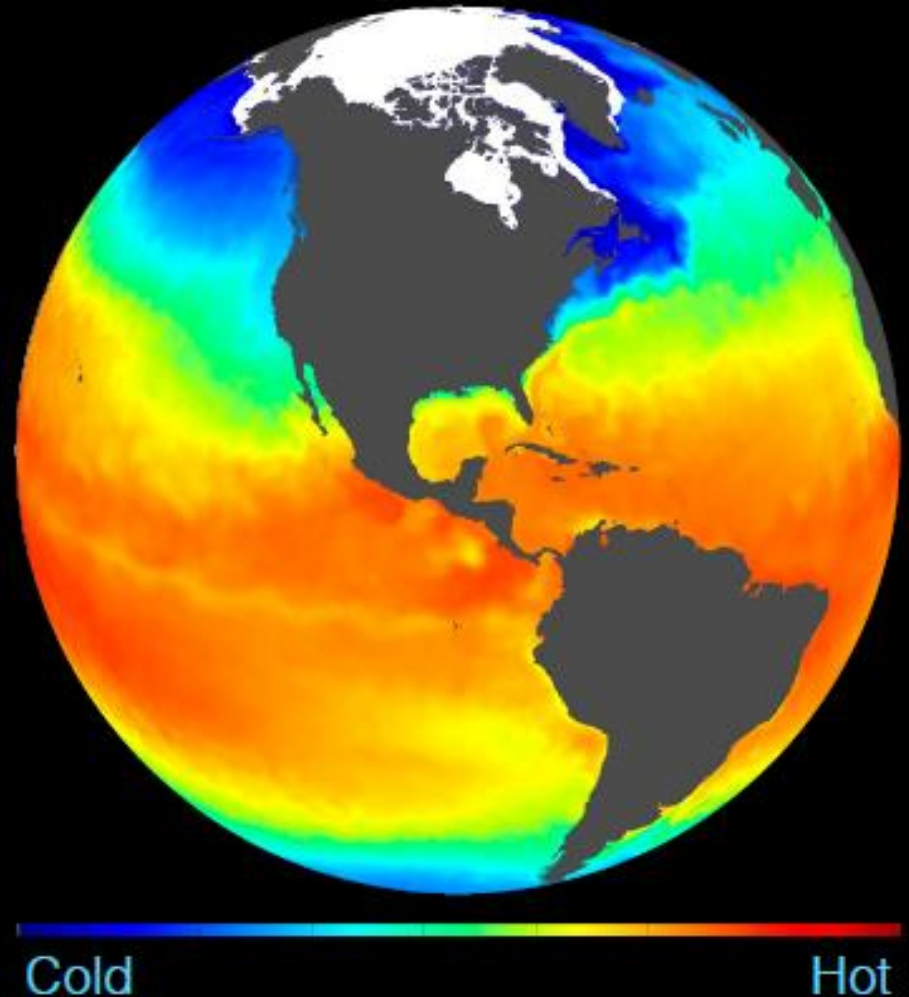


Fields and Isolines

Field-

a region with a
measurable
quantity at
every location



Example- Ocean Temperatures

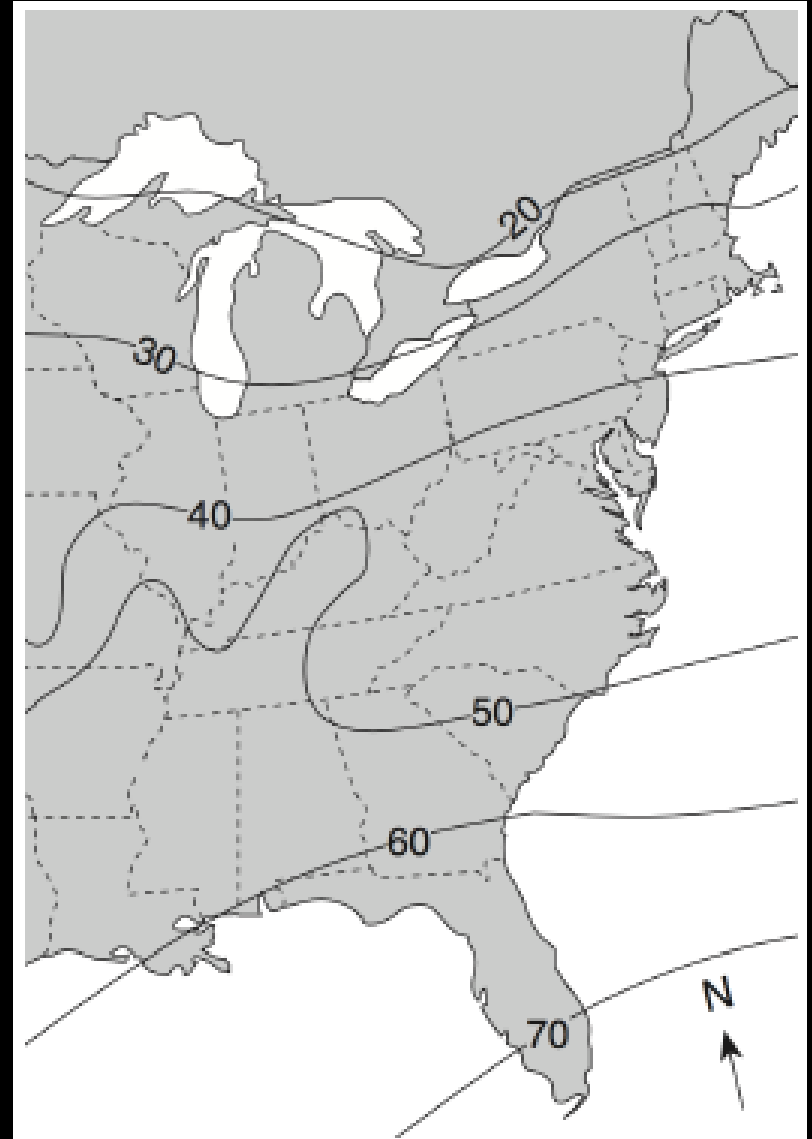
Isolines- are lines that are drawn on a field map to connect all of the points on that map that have the **same value**



- Example: **precipitation amounts (inches)**

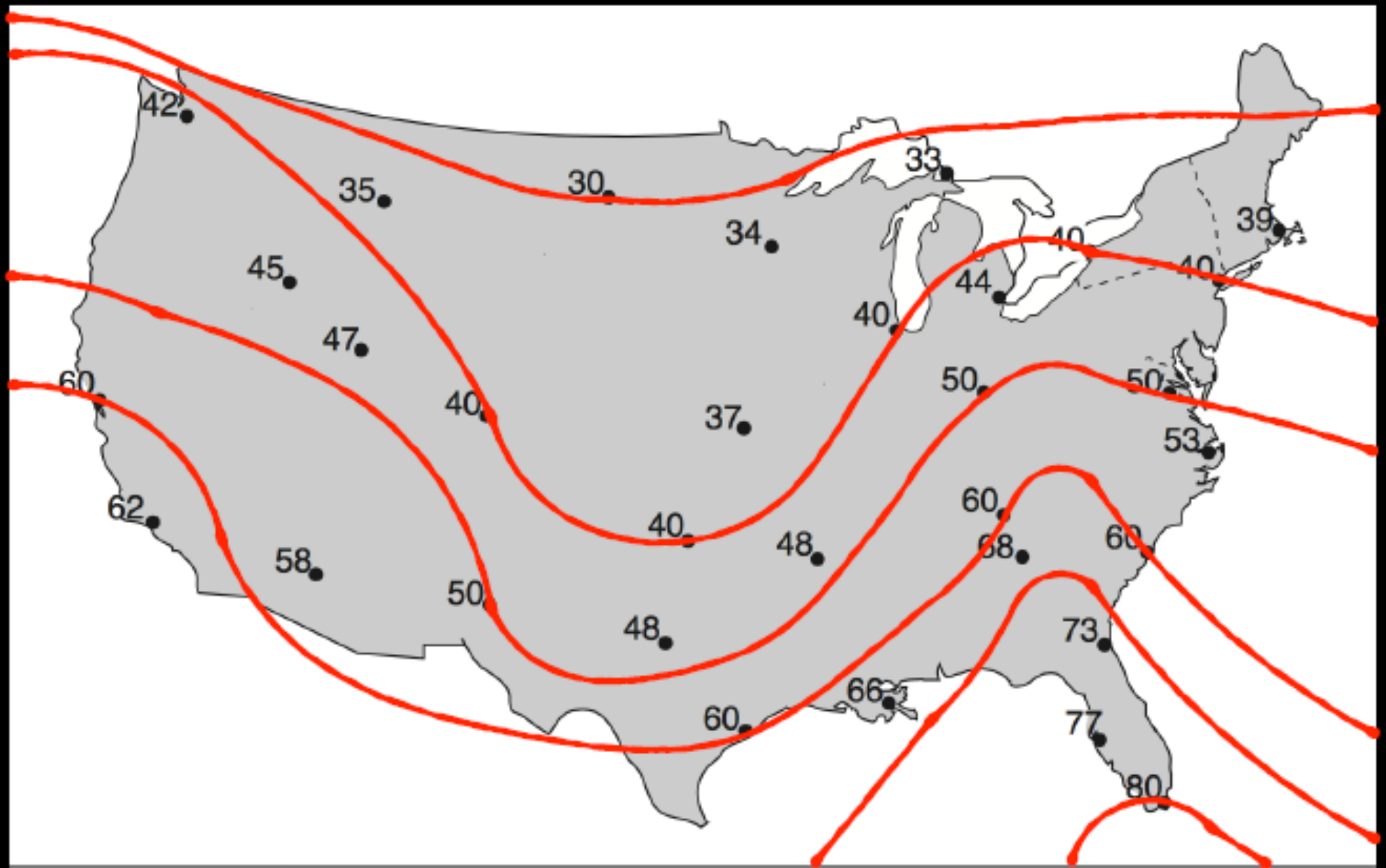
Field Maps:

- Points represent values of data found at a specific location
- To construct a field map connect the points of equal data
 - Do not connect every value... just whole numbers
 - Isolines form complete circles or end at the edge of the map



Isolines

- **There are 5 rules when drawing isolines:**
 - 1. Isolines never cross or touch each other.**
 - 2. Isolines hardly ever have sharp angles, but instead gentle curves.**
 - 3. All points on one isoline are of equal value.**
 - 4. Isolines do not stop in the middle of the map, and are either drawn off the map or connected in a circle with the same line.**
 - 5. The interval between isolines is always the same on one particular map.**



Temperature Values in the United States

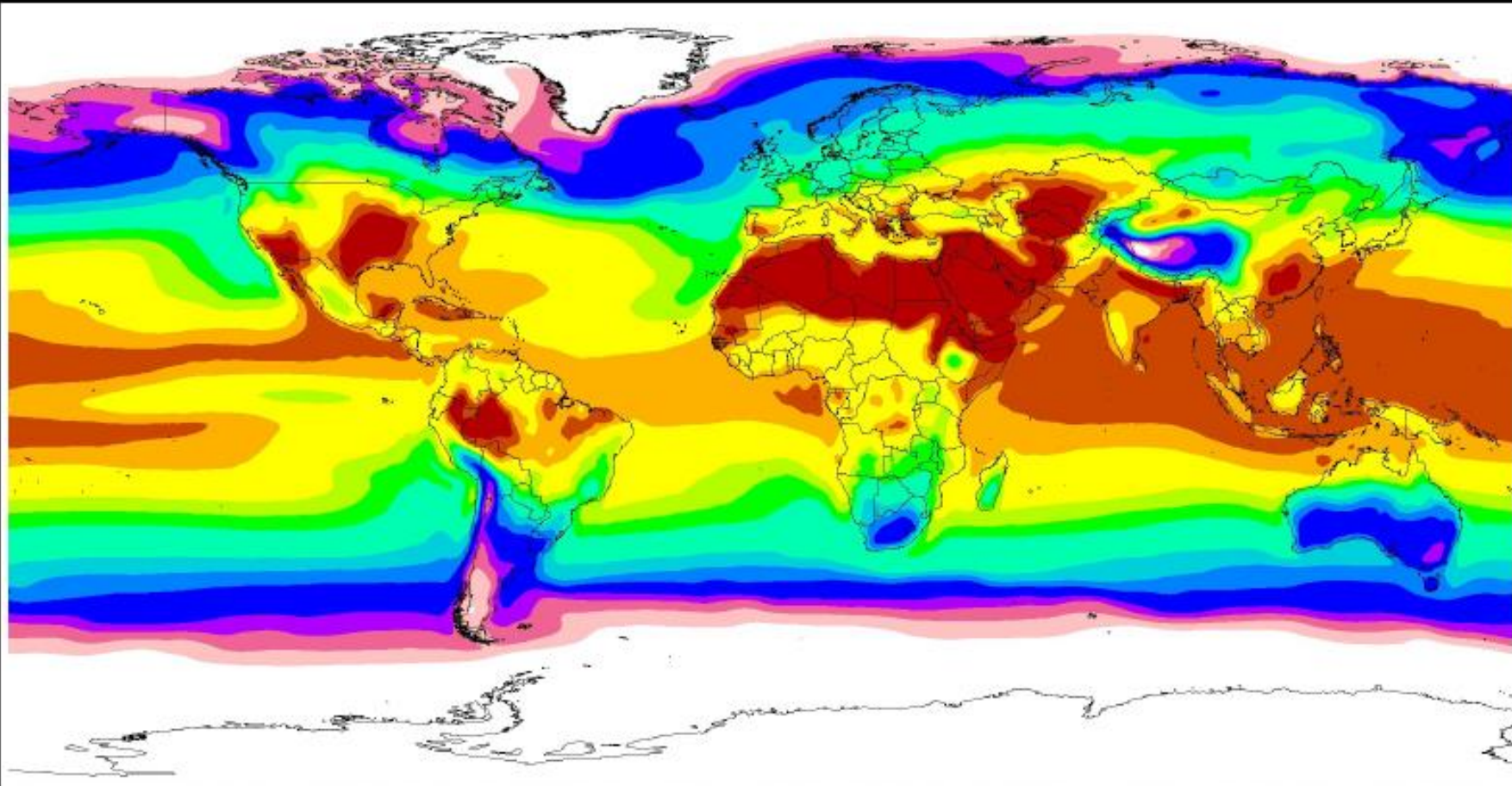
Different Types of Isolines

Isotherm - lines that connect equal points of **temperature**

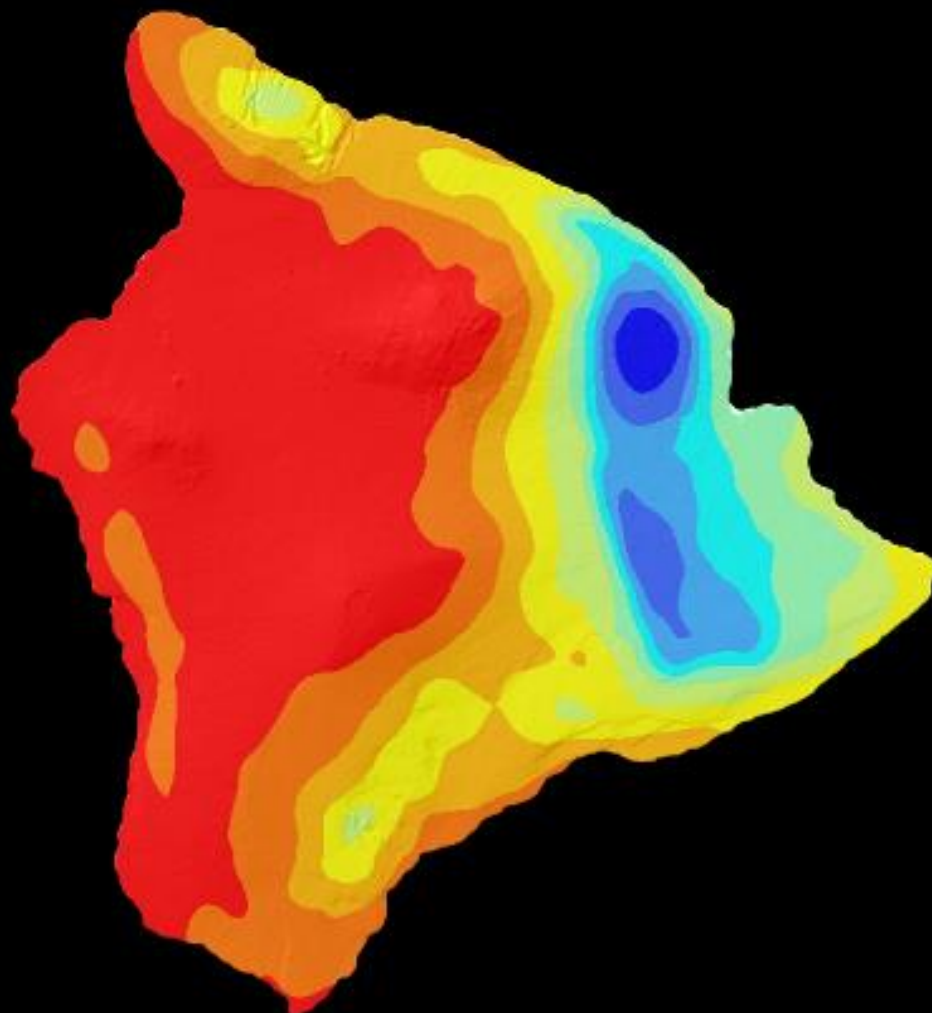
Isohyet - lines that connect equal points of **rainfall**

Isobar - lines that connect equal points of air **pressure**

Contour Line - lines that connect equal points of **elevation**



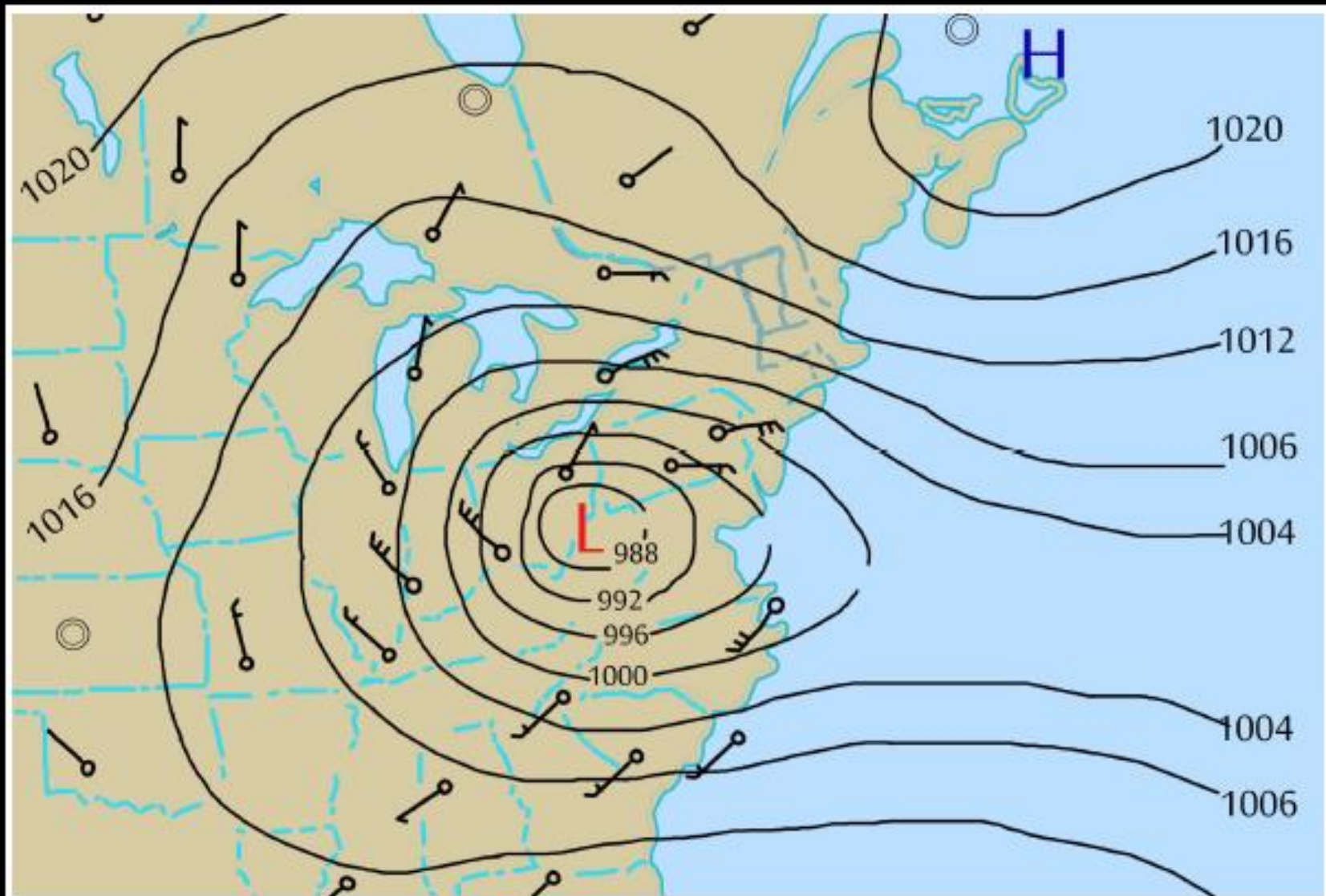
Isotherm Map



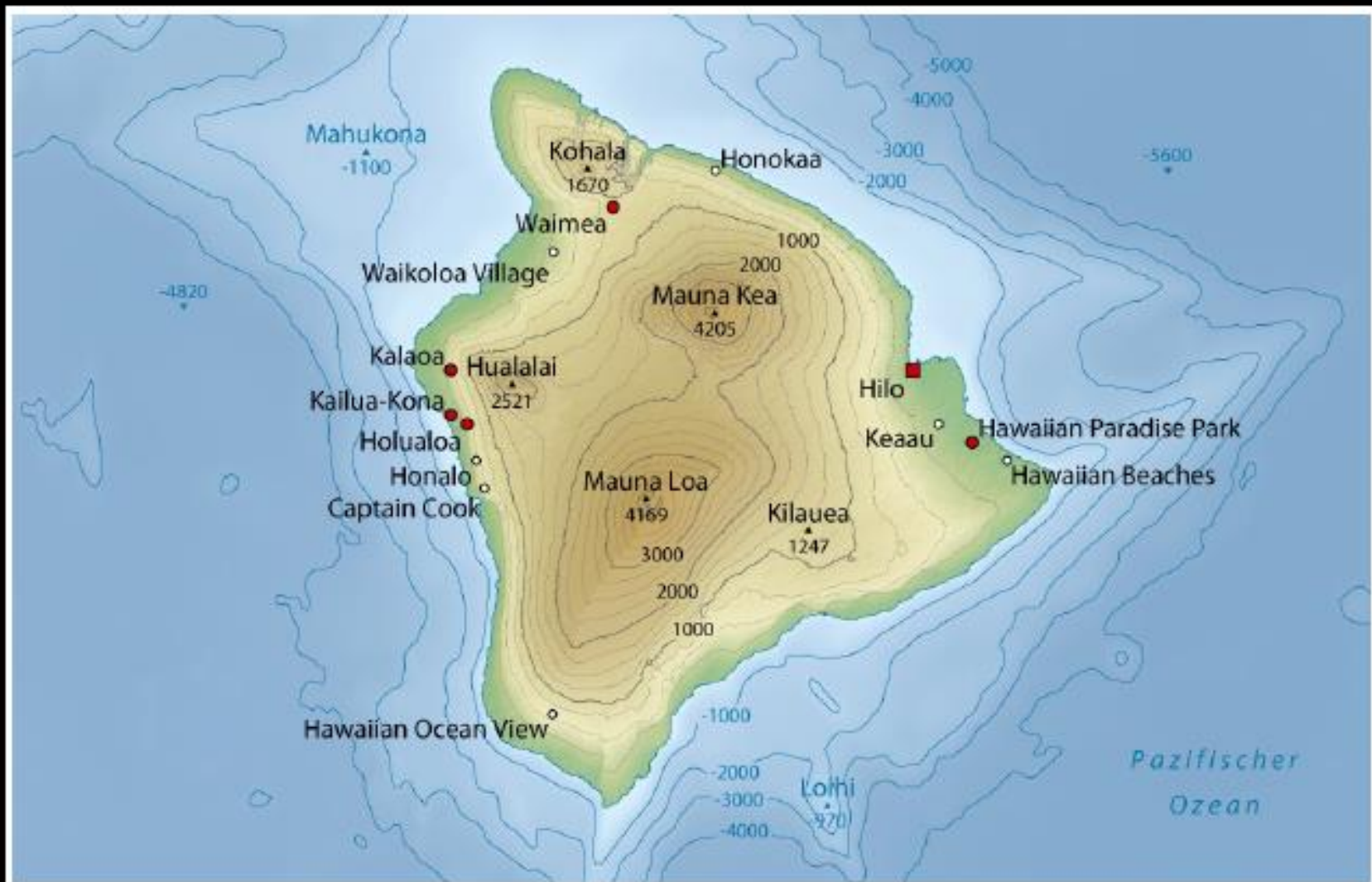
Inches of
Precipitation



Isohyet Map



Isobar Map



Contour Map



Snowfall in Buffalo



Snowfall in Buffalo



Snowfall in Buffalo

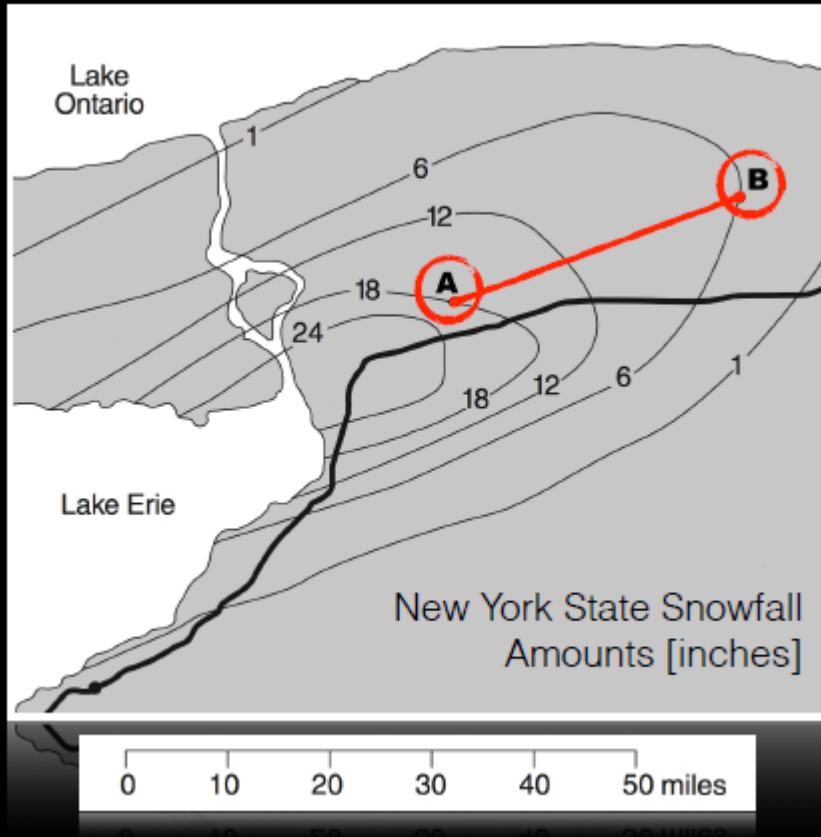
Field Maps

Gradient (slope)-

change of value within a field over the distance that the change takes place.

$$\text{Gradient} = \frac{\text{change in field value}}{\text{distance}}$$

Field Maps



Gradient = $\frac{\text{change in field value}}{\text{change in distance}}$

Gradient = $\frac{18 \text{ inches} - 6 \text{ inches}}{30 \text{ miles}}$

Gradient = $\frac{12 \text{ inches}}{30 \text{ miles}}$

Gradient = 0.4 inches/mile