

Fill out the table below:

Use the scale and the approximate center of each island as a location to measure the distances from Loihi.

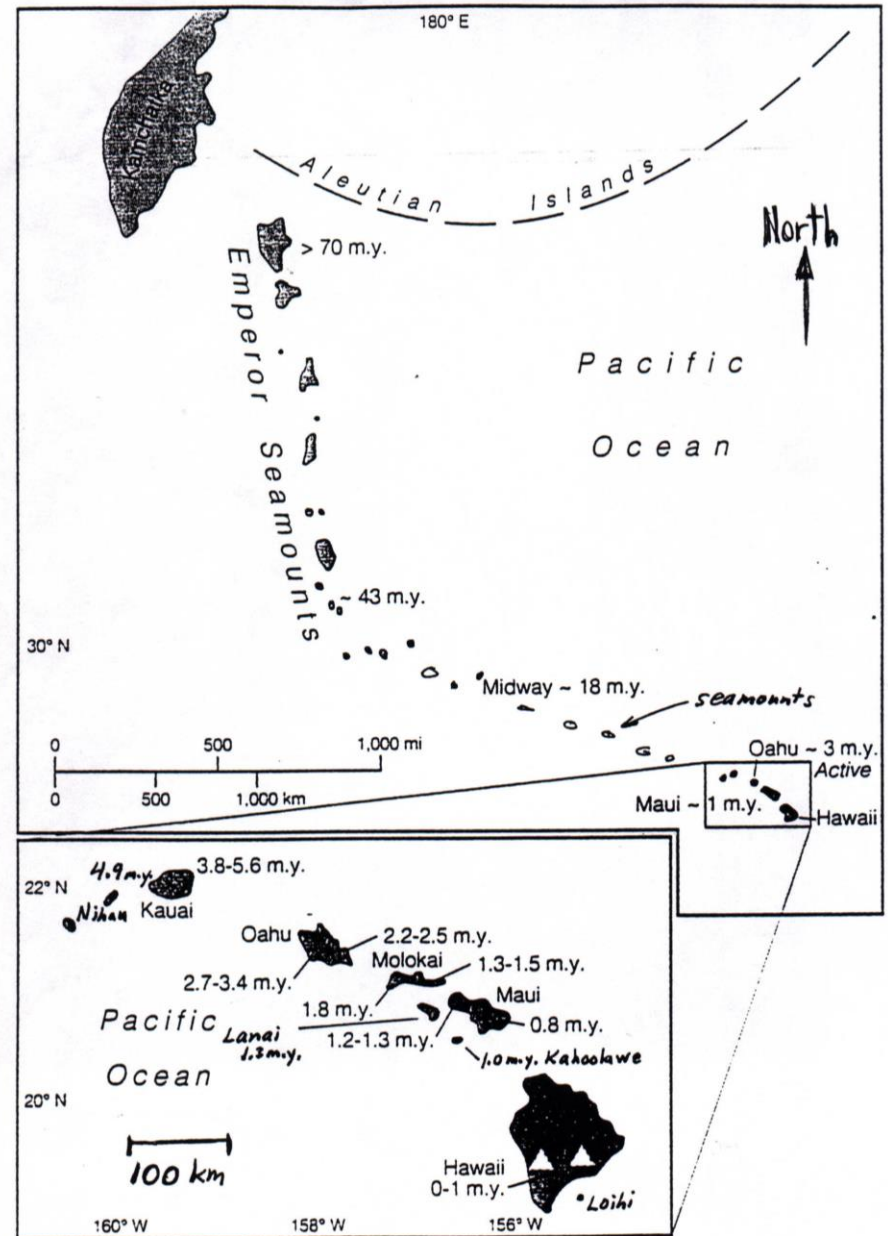
Island	Age (millions of yrs)	Distance from Loihi (km)	Velocity of Island (km/mils of year)
Hawaii			
Maui	0.8		
Lanai	1.2	250	
Oahu	2.9		
Kauai			
Nihau		560	

GRAPH: Create a position vs. time graph from your data. Label each dot with the name of the island.

Because the island of Hawaii and Loihi are still active (on the **HOTSPOT**), the ages for these volcanoes may not line up with the others causing some curvature of the age-distant relation.

Therefore, **draw an approximate "best-fit" straight line through the data points** for islands older than 0.5 million years (**ignore Hawaii**).

- Calculate the overall velocity of the Pacific Plate in km/million years. Show all work!
- Examine map. Note the trend of the Hawaiian Island chain and the continuation – the Emperor Seamounts. The top of the map is to the North. From the alignment of islands with increasing ages (from 0 to 42.4 million years), what direction has the plate moved over the hotspot?
- Describe the relationship (in words) between the distance from Loihi and the age of the volcanism for the Hawaiian Islands that is shown on your graph?



1 km = 10,000 cm

$V = \frac{\text{change in position}}{\text{change in time}}$

Hawaiian Islands: Formation & Velocity

