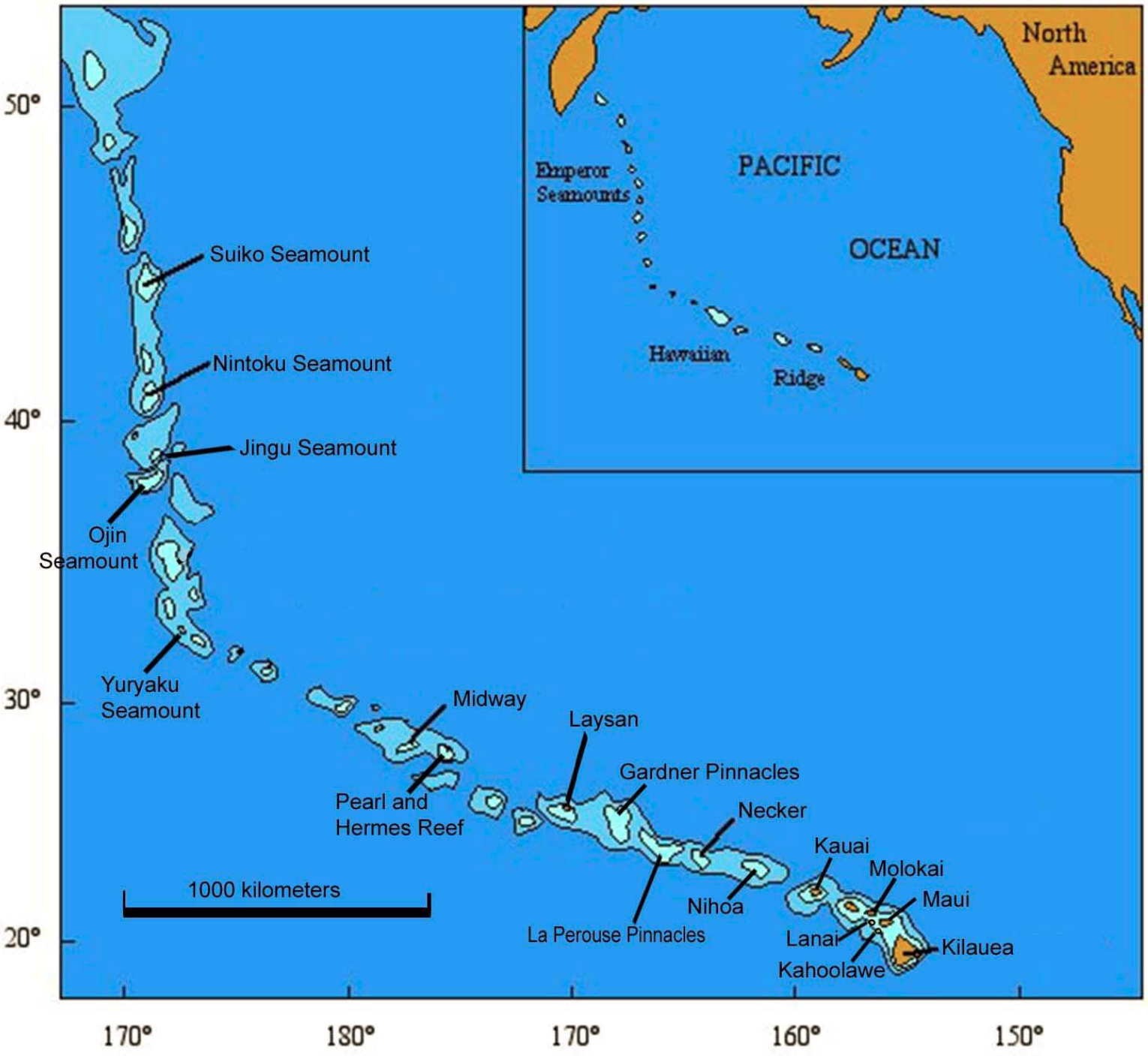

Step 1: Calculate here (using the scale on the map) how many km is represented by each mm you measure.

Volcano Name	Distance from Kilauea along trend of chain (km)	Age (In millions of years)
Kilauea	0	0-0.4
Kahoolawe		> 1.03 ± 0.18
Maui		1.32 ± 0.04
Lanai		1.28 ± 0.04
Molokai		1.76 ± 0.04
Kauai		5.1 ± 0.20
Nihoa		7.2 ± 0.3
Necker		10.3 ± 0.4
La Perouse Pinnacles		12.0 ± 0.4
Gardner Pinnacles		12.3 ± 1.0
Laysan		19.9 ± 0.3
Pearl and Hermes Reef		20.6 ± 2.7
Midway		27.7 ± 0.6
Yuryaku		43.4 ± 1.6
Ojin		55.2 ± 0.7
Jingu		55.4 ± 0.9
Nintoku		56.2 ± 0.6
Suiko		59.6 ± 0.6

Questions:

1. Do you see a trend in the data? If so, how can this trend be explained?

2. Examine the rate of movement of the plates. What happens about 40 million years ago? What might have caused this?

3. Consider the ages and positions of the islands listed above along with what you know about plate tectonics and hotspots. In what general direction is the Pacific Plate moving? (Careful… does the hotspot move or does the plate move?)

   a. Northwest b. Southeast c. Northeast d. Southwest

4. How fast was the Pacific plate moving during the last 1.1 million years between the formation of the Big Island and Maui in cm/year? To calculate this, divide the distance between the two islands by the difference in their ages.

5. How fast was the Pacific plate moving from 7.2 million years ago to 4.7 million years ago between the formation of Kauai and Nihoa in cm/year? To calculate this, divide the distance between the two islands by the difference in their ages.