

**Problem 1. You collect samples from several of the islands and seamounts on the Hawaiian-Emperor chain, and determine their age. Plot the distance from Kilauea for each sample against the age of the sample.**

Volcano Name Age (Myr) Distance (km)

Kilauea	0	0
East Maui	0.75	182
Kauai	5.10	519
Necker	10.30	1058
Laysan	19.90	1818

**Problem 2. You want to create a topographic profile of elevations across the Fox River Valley in Appleton. A profile is essentially a graph of elevation versus distance. Graph the following information.** In this example the distance is the distance from the intersection of S. Mason and S. Spencer and the elevation is feet above sea-level.

Distance (mi) Elevation (ft)

0	800
0.1	795
0.2	790
0.3	795
0.4	790
0.5	765
0.6	735
0.7	735
0.8	785
0.9	790

**Problem 3. Records from Mercer Creek near Seattle show a 12-year flood (a flood with a recurrence interval of 12 years) has a discharge of  $812 \text{ ft}^3/\text{sec}$ , a 6-year flood has a discharge of  $670 \text{ ft}^3/\text{sec}$ , a 3-year flood has a discharge of  $612 \text{ ft}^3/\text{sec}$ , and a 2 year flood has a discharge of  $504 \text{ ft}^3/\text{sec}$ . Plot this data with recurrence interval on the x-axis and discharge on the y-axis.**

