1. Name the tectonic plates located under points A, C, and E

2. What process causes tectonic plates to shift and move?

3. What plate boundaries are located at points B and D? What crustal features are forming here?

4. Draw detailed diagrams of the plate boundaries mentioned above. (Be sure to include both tectonic plates, arrows showing direction of movement)
Base your answers to questions 21 through 25 on your knowledge of Earth Science, the *Earth Science Reference Tables*, and the diagram below. Diagram I is a map showing the location and bedrock age of some of the Hawaiian Islands. Diagram II is a cross section of an area of Earth illustrating a stationary magma source and the process that could have formed the islands.

**DIAGRAM I**

KAUAI
5.6 to 3.3 million years

OAHU
2.5 to 2.2 million years

MAUI
1.3 to 1.0 million years

HAWAII
Less than 1.0 million years

PACIFIC OCEAN

**DIAGRAM II**

KAUAI

OAHU

MAUI

HAWAII

Sea Level

Moving Crustal Plate

Northwest

Mantle

Magma Source

Ocean

Southeast

21. a. If each island formed as the crustal plate moved over the magma source in the mantle as shown in diagram II, where would the next volcanic island most likely form?

b. How do you know?

22. a. Compared to the continental crust of North America, the oceanic crust in the area of the Hawaiian Islands is probably

b. How do you know?

23. Volcanic activity like that which produced the Hawaiian Islands is usually closely correlated with

24. a. Which of the Hawaiian Islands has the greatest probability of having a volcanic eruption?

b. How do you know?

25. On the grid below, construct the graphing relationship that best represents the ages of the Hawaiian Islands, comparing them from point A to point B.