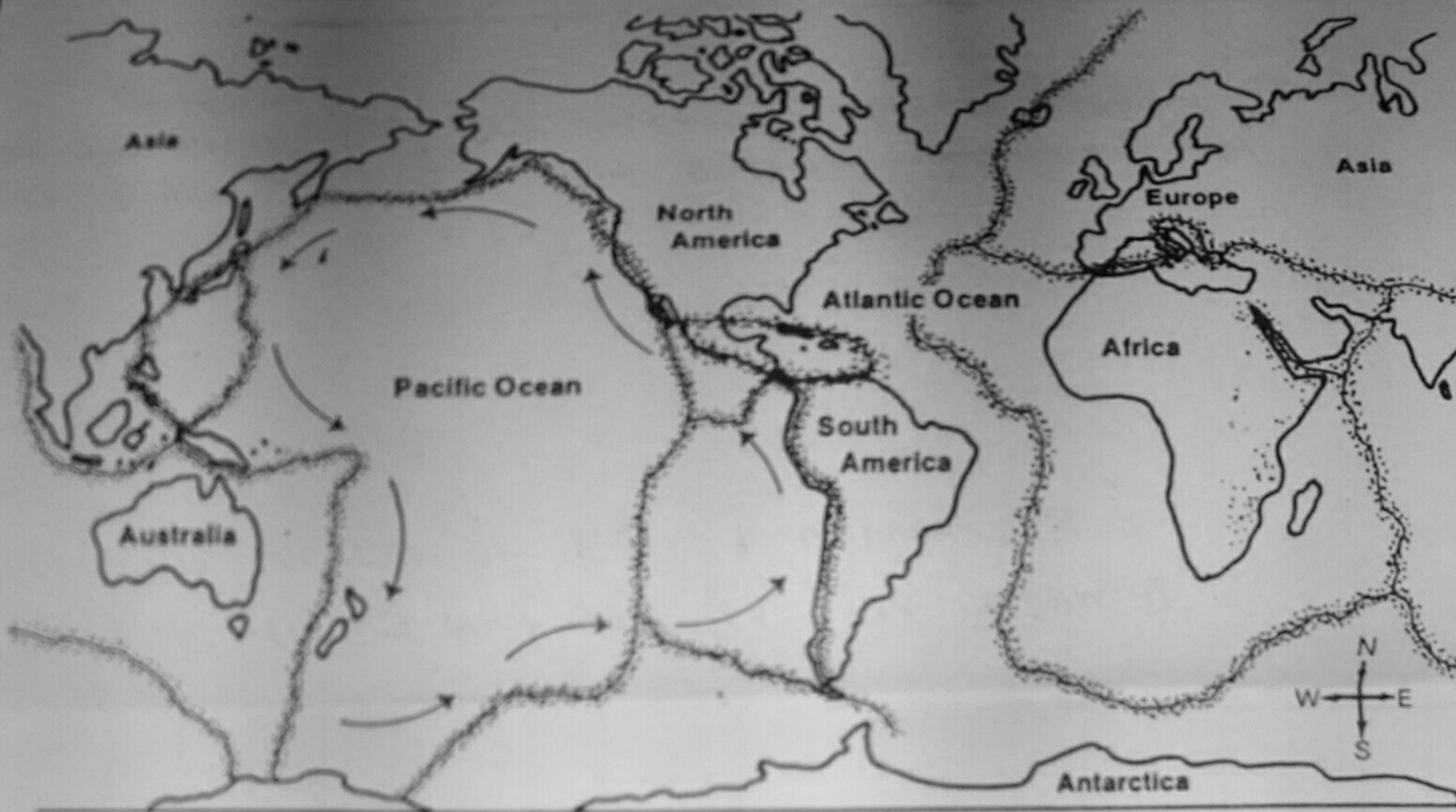


Name _____

Skill: Map reading

Trouble Spots in the World



KEY

★ earthquake centers

← "ring of fire"

~~~~~ ocean ridges

(more than 80% of world's quakes)

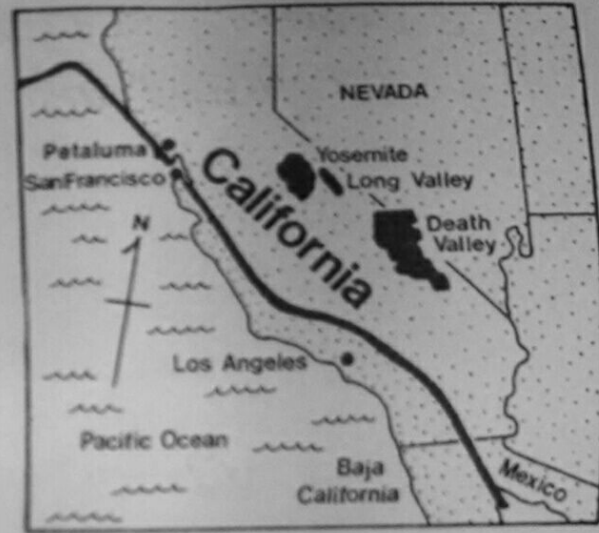
This is a map of the earth's biggest mountain ranges—the ocean ridges. They have been formed by lava that has erupted and cooled. When lava flows through an ocean ridge, small earthquakes occur. Study the map. Then write T or F before each statement.

- \_\_\_\_\_ 1. West Africa has many earthquake centers.
- \_\_\_\_\_ 2. The eastern part of North America has a greater chance of having a major earthquake than the western half.
- \_\_\_\_\_ 3. The "ring of fire" includes islands in the Pacific Ocean.
- \_\_\_\_\_ 4. Earthquakes can occur in ocean basins (land beneath the ocean).
- \_\_\_\_\_ 5. Australia has a belt of earthquake centers passing through it.
- \_\_\_\_\_ 6. The Atlantic Ocean has no major earthquake centers.
- \_\_\_\_\_ 7. It is likely that a major earthquake may occur within the "ring of fire" in the future.
- \_\_\_\_\_ 8. Europe has more earthquake centers than Africa.
- \_\_\_\_\_ 9. The "ring of fire" does not touch Antarctica.
- \_\_\_\_\_ 10. Small earthquakes and volcanoes can occur along ocean ridges.

## WHAT ABOUT CALIFORNIA?

California has two kinds of earthquakes. One kind is caused by magma rising through the ground. Magma is rising under Long Valley east of Yosemite. Long Valley is an old caldera that used to be a volcano. The magma is making earthquakes as it rises. People nearby have built a second road so they can get away quickly if scientists tell them an eruption will happen soon.

The other kind of earthquake is caused by tectonic plates moving sideways against each other. California sits on two tectonic plates. One of them is the North American Plate, which carries most of the rest of North America on it. The other is the Pacific Plate, which is slowly moving northwest and carrying some of California and the part of Mexico called Baja California with it. In a hundred million years that part of the continent will be an island just south of Alaska.



The line where the plates meet is called the SAN AN-DREAS FAULT. Look at the map above. The fault goes through the Gulf of California, makes a line through the hills near the coast, and turns west near Petaluma. Many cities are on the San Andreas Fault. California has strict laws about making schools and public buildings earthquake-safe. This will prevent many injuries when the tectonic plates under the San Andreas Fault move again.

1. California has more earthquakes than most states because
  - a. there are so many more people there all moving around.
  - b. there are so many mountains there.
  - c. it is on two plates moving different ways.
  
2. There are likely to be more earthquakes near Petaluma than in
  - a. Death Valley.
  - b. San Francisco.
  - c. Los Angeles.
  
3. You can tell from the story that
  - a. California rock is very old and brittle.
  - b. people like earthquakes, since so many people live in California.
  - c. there is more than one reason for earthquakes.