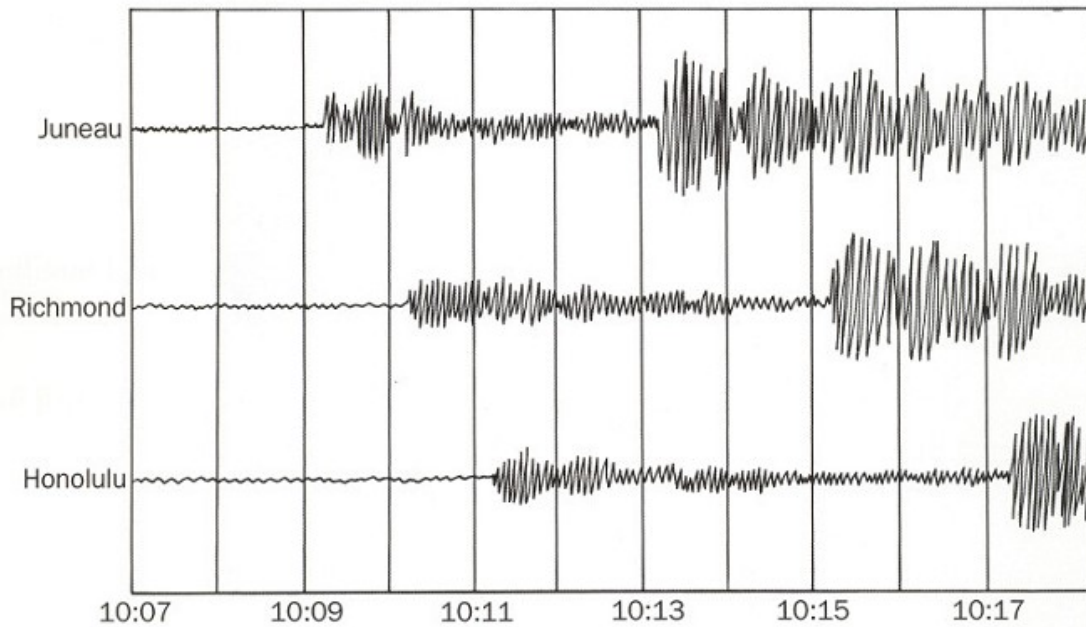


Name: _____

Period: _____

Questions 1 through 3 Three seismograph stations around the country recorded vibrations from the same earthquake. Look carefully at the seismograms. Then answer the questions on your answer sheet.



1. The earthquake was nearest to which city?
 - A. Juneau
 - B. Richmond
 - C. Honolulu
 - D. The earthquake was the same distance from all three cities because all of them recorded the earthquake.
2. Between what time intervals did the first P-wave arrive at Honolulu?
 - A. 10:10 and 10:11 A.M.
 - B. 10:11 and 10:12 A.M.
 - C. 10:15 and 10:16 A.M.
 - D. 10:17 and 10:18 A.M.
3. The times that each earthquake wave arrived at each city are different. Why?
 - A. Honolulu is on an island, and S-waves do not travel quickly through water.
 - B. The seismograph at one city is mechanical. The others are electronic.
 - C. Each city is a different distance from the earthquake's epicenter.
 - D. One city sits on loose soil, and the other cities are on bedrock.

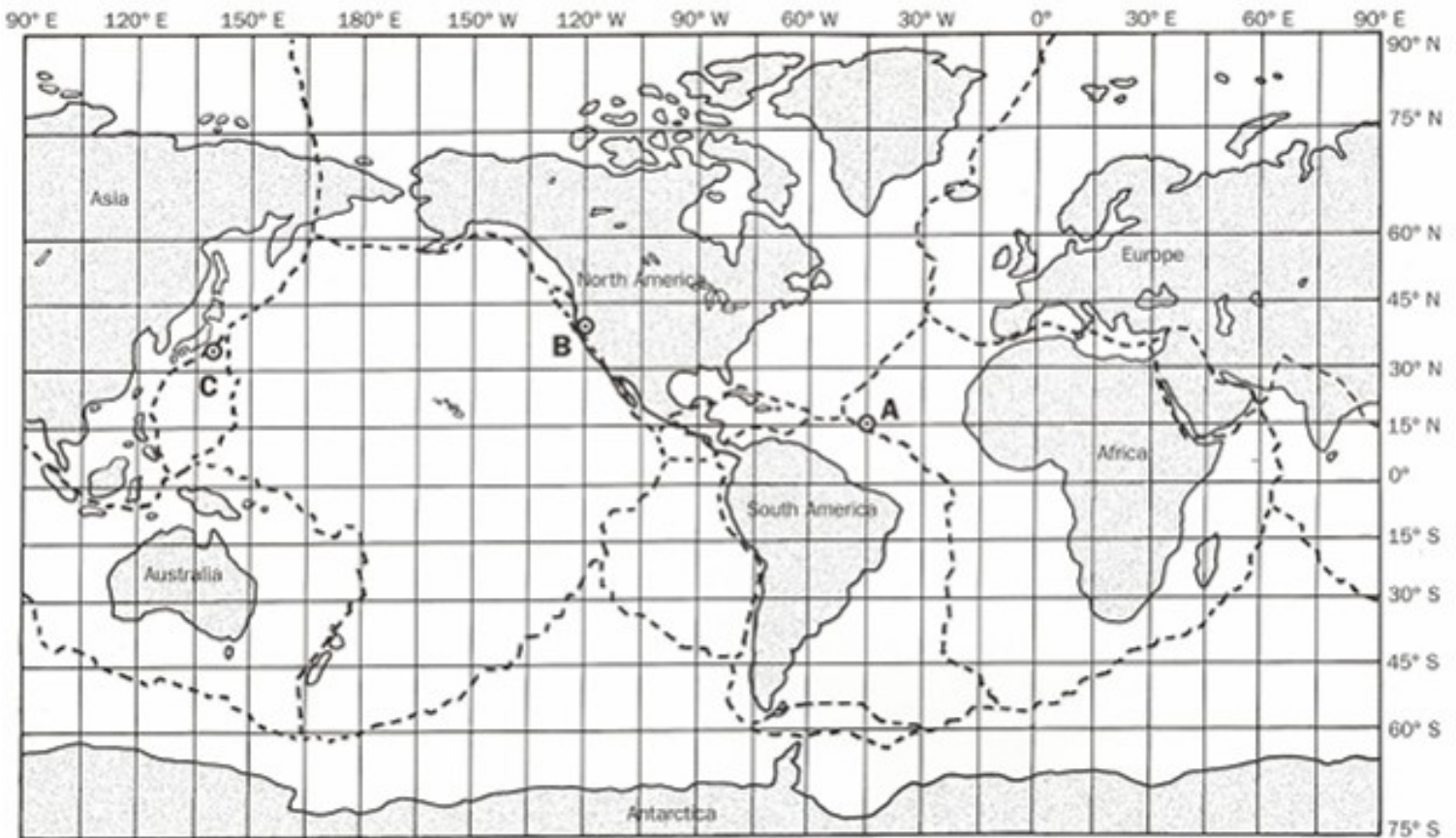
Name: _____

Period: _____

Questions 4 through 6: Decide how each earthquake wave moves and where it travels. Pick the letter in each column that describes the wave. You can use a letter more than once.

Earthquake Wave	How Does It Move?		Where Does It Travel?	
	A. Side to Side	B. Push and Pull	A. Through the Earth	B. On the Earth's Surface
P-wave	4.			
S-wave			5.	
Surface wave	6.			

Questions 7 through 9 Three earthquakes have been recorded on the world map. They are marked A, B, and C. Use the world map in this inquiry master to answer the questions.



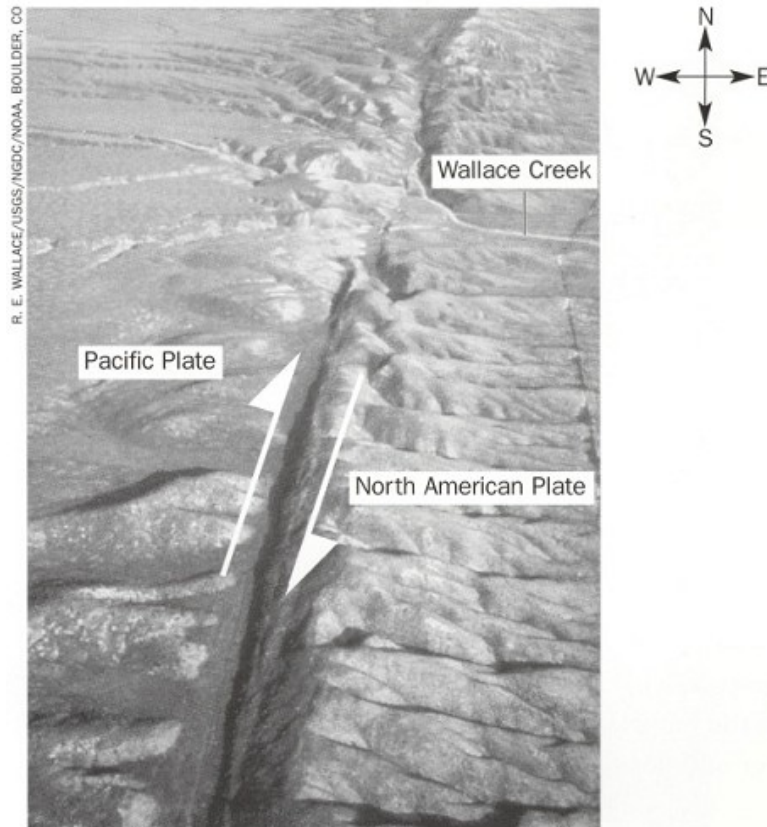
7. What is the latitude and longitude of Earthquake B?
- A. 33° N, 140° E
 - B. 15° N, 45° W
 - C. 40° N, 120° W
 - D. 12° N, 50° W

Name: _____

Period: _____

8. What was responsible for Earthquake B?
- A. Plates spreading at the mid-ocean ridge.
 - B. One oceanic plate moving beneath another oceanic plate at a trench.
 - C. Two continental plates colliding.
 - D. Two plates sliding past one another.
9. What do the earthquake locations and dashed boundaries on the map tell us?
- A. The lithosphere is broken into pieces called plates.
 - B. Earthquakes (and volcanoes) are not random occurrences; they often occur along plate boundaries.
 - C. Plates spread, collide, and slide past one another along plate boundaries and are responsible for most earthquakes (and volcanoes).
 - D. All of the above

Question 10: Examine the aerial photograph that shows part of a famous earthquake fault in California. Use the photograph to answer the question.

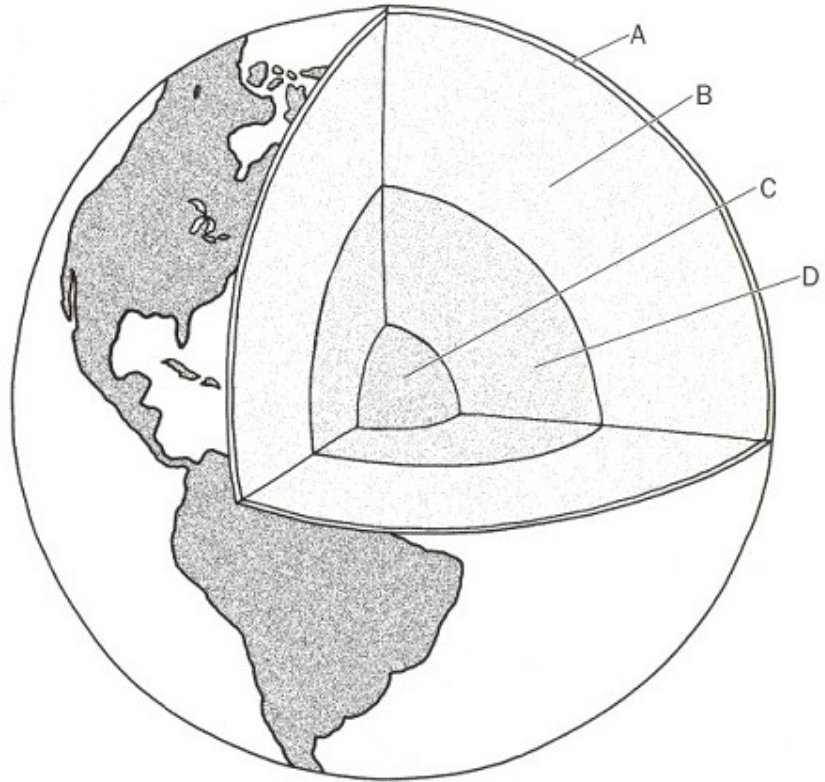


10. What evidence in the photograph shows that stress is building between the plates?
- A. The landscape consists of ridges formed as a result of hundreds of fault movements.
 - B. Wallace Creek is no longer straight; it bends sharply along the fault.
 - C. Both A and B.
 - D. Signs of stress building up between plates are not evident in the landscape.

Name: _____

Period: _____

Questions 11 through 13 Examine the diagram of the earth's interior. Match the letter with the appropriate layer.



11. Mantle _____

12. Crust _____

13. Outer core _____

14. What is one way that scientists know the outer core is liquid?

- A. P-waves do not travel through liquid.
- B. S-waves do not travel through liquid.
- C. Scientists have drilled to the core of the earth.
- D. Scientists have not hypothesized about whether the outer core is liquid or solid.

15. How do mountains form?

- A. An ocean plate sinks beneath another plate and begins to melt, sending melted rock up to the surface, which forms volcanic mountains or islands.
- B. Hot rock from within the earth rises through the ocean floor as plates separate. This forms a volcanic mountain chain, or ridge, on the ocean floor.
- C. Two continental plates collide, and the land folds and crumples like paper.
- D. All of the above.