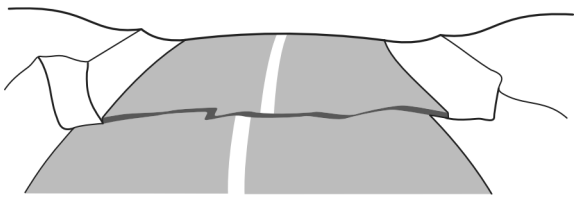
6.E.2.2 - Plate Movement

Name: _____ **Date:** _____

1. The road shown below was suddenly broken by a natural event.



Which natural event *most likely* caused the crack in the road?

A. wind

B. earthquake

C. a lava flow from a volcano

D. an avalanche down a mountain

2. Which feature would *most likely* be forming at converging continental tectonic plate boundaries?

A. rift valley

B. deep trench

C. volcanic cone

D. uplifted mountain

3. Which of the following is the best evidence that Earth's continents were once in vastly different positions than they are today?

A. Penguins are found only in the Southern Hemisphere.

B. Fossils of tropical plants are found in Antarctica.

C. Volcanoes encircle the Pacific Ocean.

D. Major rivers form deltas from continental erosion.

4. Which of the following provides evidence for plate tectonics?

A. sea-floor topography

B. ocean currents

C. Coriolis effect

D. atmospheric temperatures

5. Which of the following is *most* responsible for the formation of new crust at the edge of a tectonic plate?

A. mountain building at a continent-continent convergent boundary

B. magma rising up from the mantle at a divergent boundary

C. two tectonic plates sliding past one another at a transform boundary

D. subduction of one oceanic plate under another at a convergent boundary

6. Earthquake vibrations are detected, measured, and recorded by instruments called

A. sonargraphs.

B. seismographs.

C. Richter scales.

D. magnetometers.

7. The Richter scale measures which of the following earthquake characteristics?

A. intensity

B. magnitude

C. frequency

D. probability

8. Earthquake activity in California is primarily caused by

A. the lowering of aquifer levels.

B. the interaction of tides with the coast.

C. mining activity during the nineteenth century.

D. plates grinding past each other along active faults.

9. *The table below shows how far away people can feel tremors from earthquakes of different magnitudes. The table also shows about how many times each year earthquakes of different magnitudes occur. Use the table to answer the following question(s).*

Magnitude	Distance From Earthquake That Tremors Can Be Felt	Number Occurring Each Year
3	24 kilometers	49,000
4	48 kilometers	6,200
5	112 kilometers	800
6	200 kilometers	120
7	400 kilometers	18
8	720 kilometers	1

If an earthquake with a magnitude of 2 occurred, how far away from the earthquake would the tremors most likely be felt?

A. more than 112 kilometers

B. between 48 and 112 kilometers

C. between 24 and 48 kilometers

D. less than 24 kilometers

10. Which of these is an immediate result of the movement of tectonic plates?

A. ocean currents
B. earthquakes
C. glaciers
D. tides

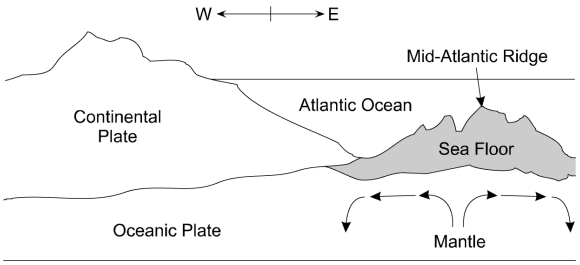
11. Which of the following *best* describes Earth's tectonic plates?

A. They move away from each other at the equator.
B. They move because of convection currents in the mantle.
C. They collide at midocean ridges.
D. They form at subduction zones.

12. An earthquake occurs when the tectonic plates below Earth's surface suddenly shift. These shifts of the tectonic plates are caused by

A. movements in Earth's core.
B. movements in Earth's mantle.
C. deposition of sediments.
D. eruption of volcanoes.

13. **Use the diagram below to answer the following question.**



On the Atlantic Ocean floor, there is a long ridge of underwater mountains caused by volcanic eruptions. New volcanoes keep erupting, and new mountains keep forming. Why is this happening?

A. A new continent is forming.
B. The ocean floor is spreading.
C. Earth's center is becoming hotter.
D. Crustal plates are colliding.

14. Which of the following are formed when two crustal plates collide with one another?

A. hot spots
B. rift valleys
C. mountain ranges
D. mid-ocean ridges

15. Earthquakes and volcanic eruptions occur both on land and in water.

Earthquakes and volcanic eruptions *most* often occur

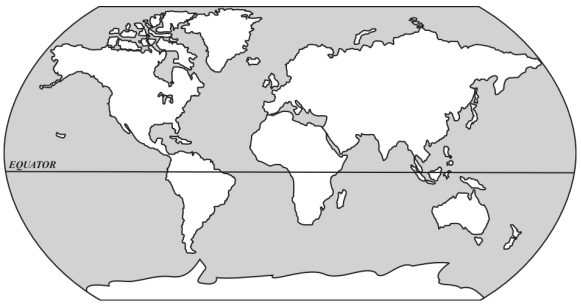
A. near plate boundaries
B. on large pieces of land
C. in large bodies of water
D. in regions near the equator

16. Earthquake waves are recorded by seismograph machines.

What does an earthquake wave transmit?

A. energy
B. light
C. particles
D. speed

17.



This map shows the continents as they appear on Earths surface today. It would be correct to say that in another 50 years the continents will

A. have moved to entirely new positions.
B. be in almost the same positions as they are in today.
C. have joined to become one large continent.
D. be moving much faster than they are today.

18. The best evidence that the continents were once connected is that they have matching

A. weather, fossils, and rock types.
B. rock types, fossils, and coastlines.
C. coastlines, weather, and rock types.
D. coastlines, weather, and fossils.

19. Two plates composed of rock of similar density meet along a convergent boundary.

Which statement describes what will happen where the two plates meet?

A. The plates will rub against each other, causing shearing and creating fault lines in the interior of the plates.

B. The plates will collide with neither plate subducting, causing the crust to pile up and form a mountain range.

C. The plates will collide, and the compression will heat the plates, causing some of the plates to melt and form volcanic mountains.

D. The plates will rub against each other, causing one plate to subduct underneath the other plate and forming a deep trench along the boundary.

20. Which of these describes the outcome of the collision between oceanic and continental crust?

A. The two portions of crust will stop moving.

B. The continental crust will subduct beneath the oceanic crust.

C. The two portions of crust will slide past one another, side by side.

D. The oceanic crust will subduct beneath the continental crust.

21. New crust is being produced at a mid-ocean ridge. How does this affect Earth's crust?

A. The total amount of crust is always increasing.

B. The new crust is denser than older crust.

C. The total amount of crust is always decreasing.

D. The older crust is recycled at subduction zones.

22. Most scientists believe that Earth's crust is composed of plates. There are two kinds of crust. ***Oceanic crust*** is more dense, on average, than ***continental crust***. Accordingly, what would most likely happen if a plate of oceanic crust and a plate of continental crust collided?

A. The oceanic crust would sink below the continental crust.

B. The oceanic crust would ride above the continental crust.

C. The continental crust would sink below the oceanic crust.

D. The continental crust would become thinner than the oceanic crust.

23. Alfred Wegner's Theory of Continental Drift was not well accepted because he couldn't say what force could be big enough to move continents. Current theories explain this movement with

A. subduction zones at continental margins.

B. hot spots forming under continents.

C. magnetic reversals of the north and south poles.

D. convection currents in the mantle.