USA TEST PREP

UNIT 4

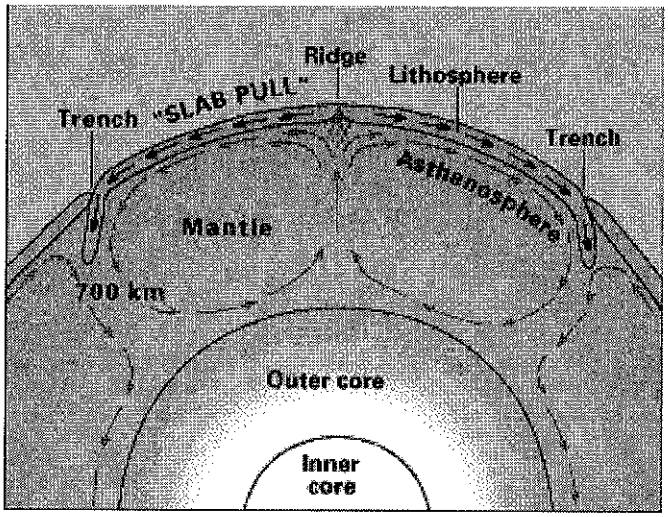
Grade 6 Science EOG Quiz

Geology - (S6E5.a.) Earth's Crust, Mantle, Core, (S6E5.e.) Lithosphere Plates, (S6E5.f.) Earth Surface Processes

Student Name: _____ Date: _____

Teacher Name: BRITTANY DUDEK Score: _____

1)



What is the main method of heat transfer from the core to the crust of Earth?

A) conduction
B) convection
C) insulation
D) radiation

2)

Data Analysis

Elements	Density
Aluminum	2.698 g/mL
Calcium	1.54 g/mL
Iron	7.8738 g/mL
Silicon	2.3296 g/mL

Sanjay is learning about the elements that make up Earth's crust. Ms. Richards, his Earth science teacher, gives him an element and asks him to determine which element from Earth's crust it is. She also provides Sanjay with this table. Sanjay weighs the element and finds that it has a mass of 17.98 g. By placing the element in water, he determines the volume of the substance to be 2.2835 mL.

Based on the table from Ms. Richards, what element from Earth's crust did Ms. Richards gave to Sanjay?

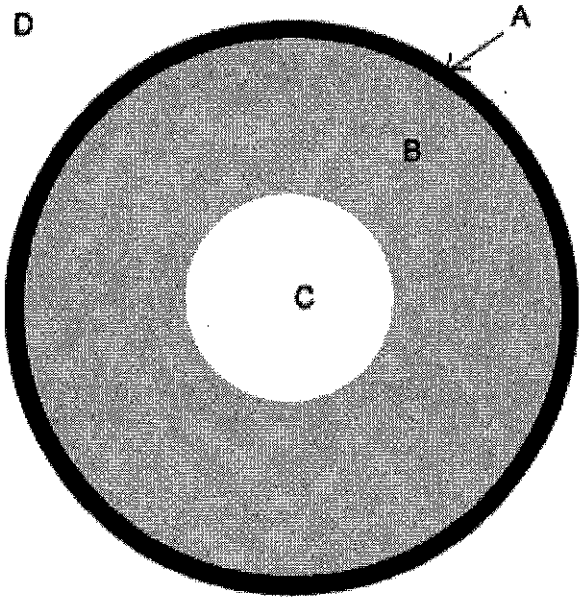
A) iron
B) calcium
C) aluminum
D) silicon

3) How is the crust DIFFERENT from the other layers of the Earth?

A) It is hotter.
B) It is thinner.
C) It is mostly liquid.
D) It is under pressure.

4)

	Temperature	Density	Composition
Crust	Air temp-500°C		Basalt and Granite
Mantle	500°C-900°C		Silicate Rocks
Core	5000°C-7000°C		Mostly Iron



Layer B in the diagram is located between the crust and core in terms of location, temperature, and pressure. What part of the earth is labeled layer B?

A) the core
B) the crust
C) the mantle
D) the atmosphere

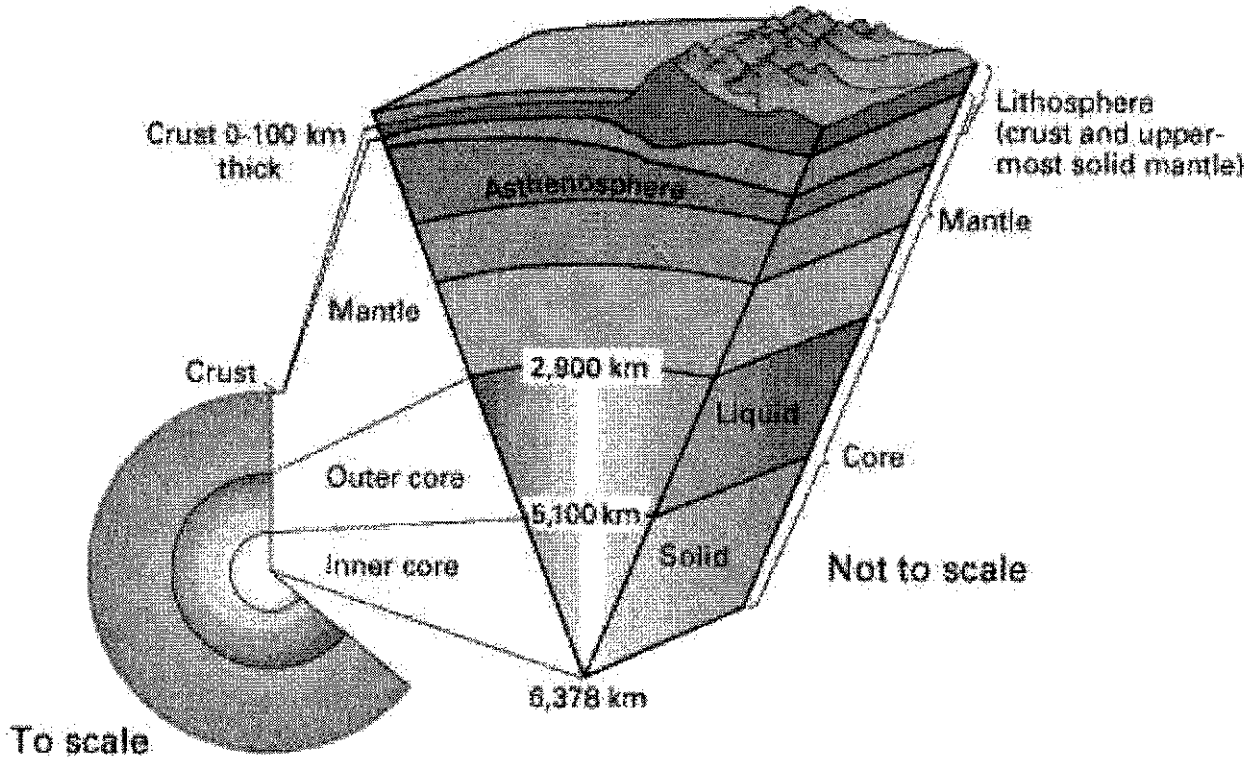
5) If you were to travel from the surface to the center of Earth, the temperature would
- A) increase minimally.
- B) stay about the same.
- C) increase dramatically.
- D) decrease dramatically.

6) Which BEST describes the composition of the Earth's core?
- A) semi-molten
- B) water and organic substances
- C) a solid lower part and a liquid upper part
- D) contains volcanic, sedimentary and granitic rocks

7) How does the density of the Earth's core compare to the other layers of the Earth?
- A) The core is the densest layer.
- B) The core is the least dense layer.
- C) The core is only less dense than the crust.
- D) The core is only less dense than the mantle.

8) How does the temperature of the Earth's mantle compare to the other layers of the Earth?
- A) The mantle is hotter than the core.
- B) The mantle is hotter than the crust.
- C) The mantle is the same temperature as the core.
- D) The mantle is the same temperature as the crust.

9)

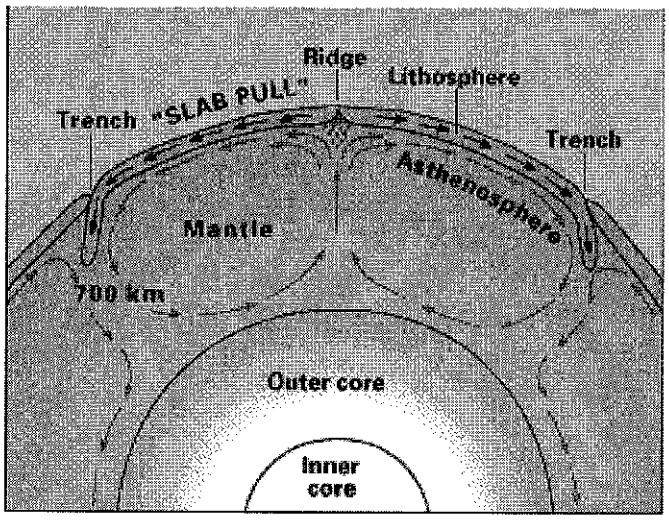


According to the information in the diagram, which layer of the Earth is liquid?
- A) crust
- B) mantle
- C) outer core
- D) inner core

10) Which layer of Earth is the warmest?

A) crust
B) inner core
C) outer core
D) upper mantle

11)



The convection shown in the diagram is powered by heat from which part of the Earth?

A) core
B) crust
C) ocean
D) sun

12) Geologists trying to drill into the mantle would MOST LIKELY drill from a platform in the ocean, rather than on land, because the crust beneath the ocean is

A) older.
B) softer.
C) thinner.
D) less dense.

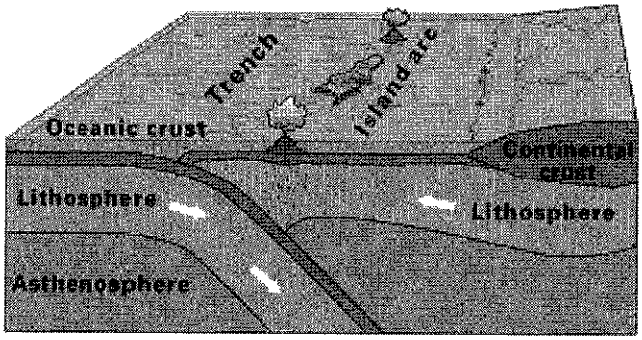
13) How are the mantle and the inner core ALIKE?
- A) They are both solid.
- B) They both have the same temperature.
- C) They are both under the same pressure.
- D) They are both very close to Earth's center.

14) What events caused the formation of most islands in the South Pacific?
- A) earthquakes
- B) hurricanes
- C) meteors
- D) volcanoes

15) If scientists were able to stop the tectonic plates from moving, people on Earth would no longer have
- A) the tides.
- B) earthquakes.
- C) ocean waves.
- D) changes in seasons.

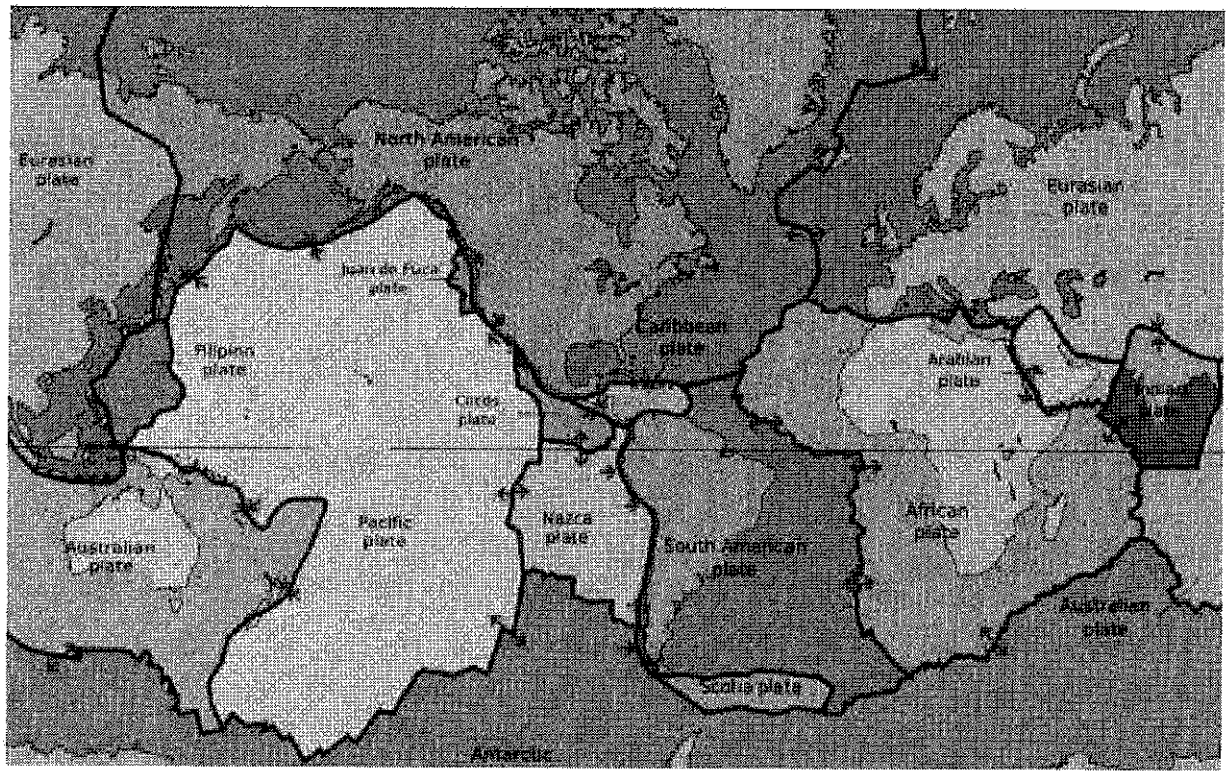
16) Different events on Earth are associated with different tectonic plate boundaries. Which events are associated with transform plate boundaries?
- A) folded mountains
- B) faults and earthquakes
- C) trenches and island arcs
- D) volcanoes and sea floor spreading

17)



Observe this diagram of a plate boundary. One statement BEST describes what is happening. It is that
- A) the oceanic crust is melting.
- B) volcanic islands are forming.
- C) this is typical of a subduction zone.
- D) the tectonic plates are moving away from each other.

18)



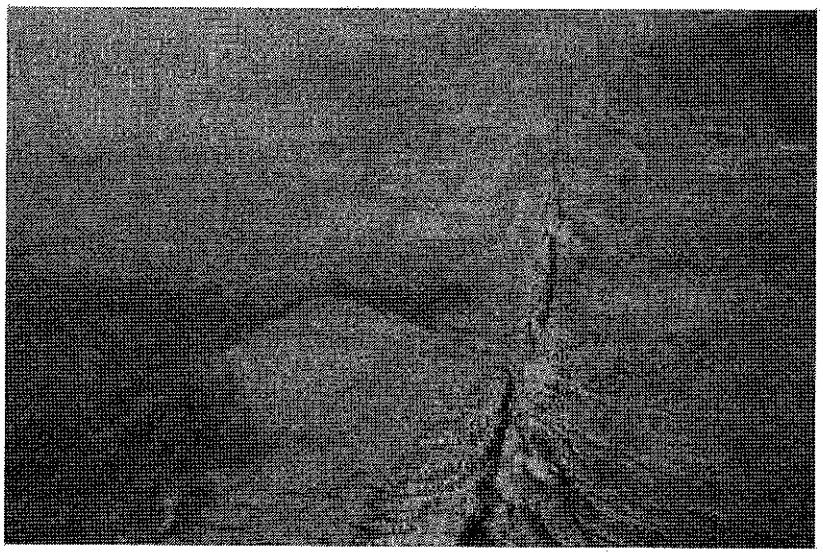
The map shown would be useful in predicting the location of future

A) droughts
B) earthquakes
C) hurricanes
D) tornadoes

19) The movement of the tectonic plates is caused by

A) convection currents in Earth's mantle.
B) the gravity of the iron-nickel core.
C) the rotation of the Earth.
D) the Moho discontinuity.

20)



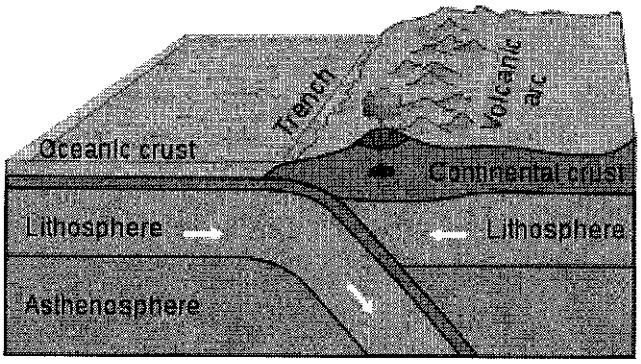
This crack shown in the lithosphere was created by the movement of two or more tectonic plates. What is this crack called?

A) deposition
B) fault

21) In some areas of the world, like California and Japan, earthquakes are a common occurrence. How can this best be explained?

A) The strong ocean currents are undermining both areas causing earthquakes.
B) Both area are subjected to strong ocean wind and waves that causes earthquakes.
C) Both areas are located near the edge of the Pacific Ocean, the unstable sand causes earthquakes.
D) Both areas are on the boundary of active plate margins, the motion of the plates causes earthquakes.

22)



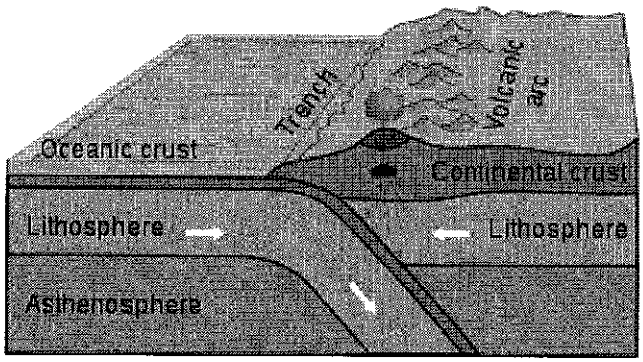
Subduction zones occur on Earth where dense oceanic crust dives under more buoyant continental crust. These boundaries are characterized by a deep ocean trench next to a high continental mountain range, large numbers of earthquakes and volcanoes. All of this is further evidence for the

A) big bang theory.
B) origin of the species.
C) theory of plate tectonics.
D) theory of natural selection.

23) There are three types of plate boundaries. Which choice is NOT a type of plate boundary?

A) convergent
B) divergent
C) thrust
D) transform

24)



An earthquake is a vibration of the Earth produced by a rapid release of energy. This vibration usually begins when there is a build-up of stress in the Earth's crust resulting in

A) tectonic plates buckling up.
B) rift zones under the oceans.
C) plate movement at fault lines.
D) convection currents within Earth's magma.

What geological forces might be responsible for this range of mountains?

A) diverging tectonic plates
B) converging tectonic plates
C) erosion of the land by the ocean
D) deposition of sediments by the ocean

26) Hawaii is located over a tectonic plate. Because of this, Hawaii is MOST LIKELY to experience

A) erosion.
B) tornadoes.
C) hurricanes.
D) volcanic eruptions.

27) The movement of earth's plates directly cause all **EXCEPT** this type of catastrophic event:

A) ice age
B) tsunami
C) volcano
D) earthquake