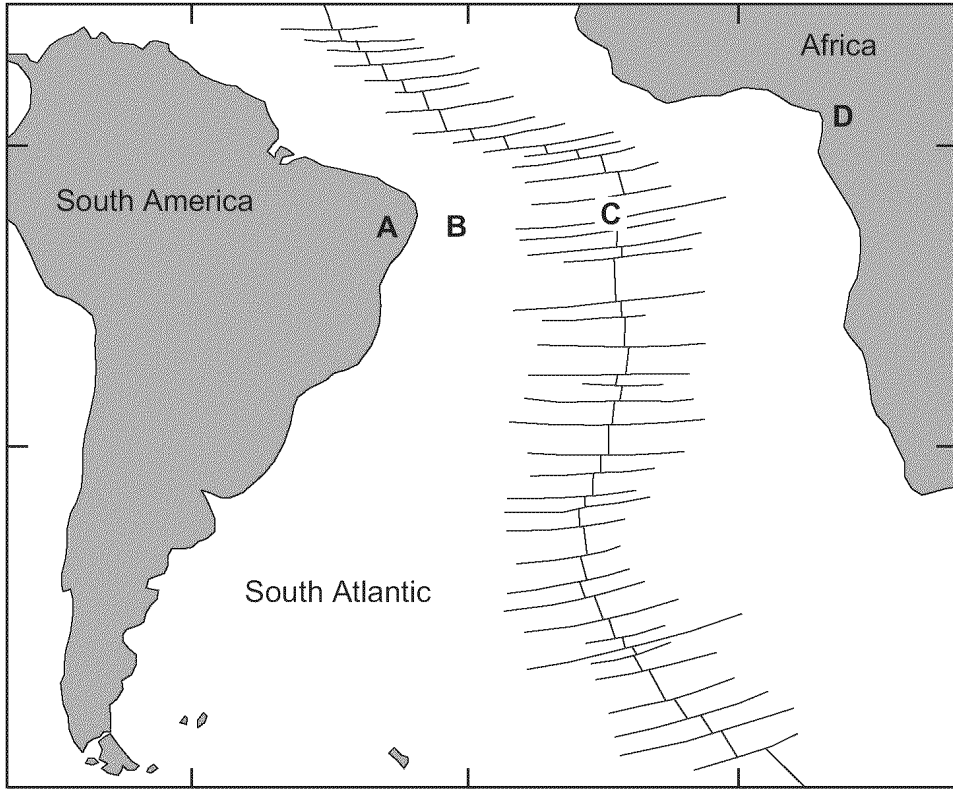


Practice Questions: Earth's Interior

- Which part of Earth's interior is inferred to have convection currents that cause tectonic plates to move?
A) rigid mantle B) asthenosphere
C) outer core D) inner core
- Earth's outer core is best inferred to be
A) liquid, with an average density of approximately 4 g/cm^3
B) liquid, with an average density of approximately 11 g/cm^3
C) solid, with an average density of approximately 4 g/cm^3
D) solid, with an average density of approximately 11 g/cm^3
- Why is Earth's outer core inferred to be a liquid?
A) *P*-waves can pass through the outer core.
B) *P*-waves cannot pass through the outer core.
C) *S*-waves can pass through the outer core.
D) *S*-waves cannot pass through the outer core.
- The rock between 2,900 kilometers and 5,200 kilometers below the Earth's surface is inferred to be
A) an iron-rich solid B) an iron-rich liquid
C) a silicate-rich solid D) a silicate-rich liquid
- Compared to Earth's continental crust, Earth's oceanic crust is
A) thinner and more dense
B) thinner and less dense
C) thicker and more dense
D) thicker and less dense
- Beneath which surface location is Earth's crust the thinnest?
A) East Pacific Ridge
B) the center of South America
C) Old Forge, New York
D) San Andreas Fault
- Which statement most accurately compares Earth's crust and Earth's mantle?
A) The crust is thinner and less dense than the mantle.
B) The crust is thinner and more dense than the mantle.
C) The crust is thicker and less dense than the mantle.
D) The crust is thicker and more dense than the mantle.
- The interior of Earth between a depth of 5200 kilometers and 6300 kilometers is inferred to be composed mostly of
A) silicon and iron B) silicon and oxygen
C) iron and lead D) iron and nickel
- Which element is most abundant in Earth's crust?
A) nitrogen B) hydrogen
C) oxygen D) silicon
- Compared to the continental crust, the oceanic crust is
A) less dense and less felsic
B) less dense and less mafic
C) more dense and more felsic
D) more dense and more mafic

11. Base your answer to the following question on the map below. The map shows the continents of Africa and South America, the ocean between them, and the ocean ridge and transform faults. Locations *A* and *D* are on the continents. Locations *B* and *C* are on the ocean floor.



Which table best shows the relative densities of the crustal bedrock at locations *A*, *B*, *C*, and *D*?

- A) **Relative Densities of Crust**

More Dense	Less Dense
A, B	C, D

- B) **Relative Densities of Crust**

More Dense	Less Dense
B, C	A, D

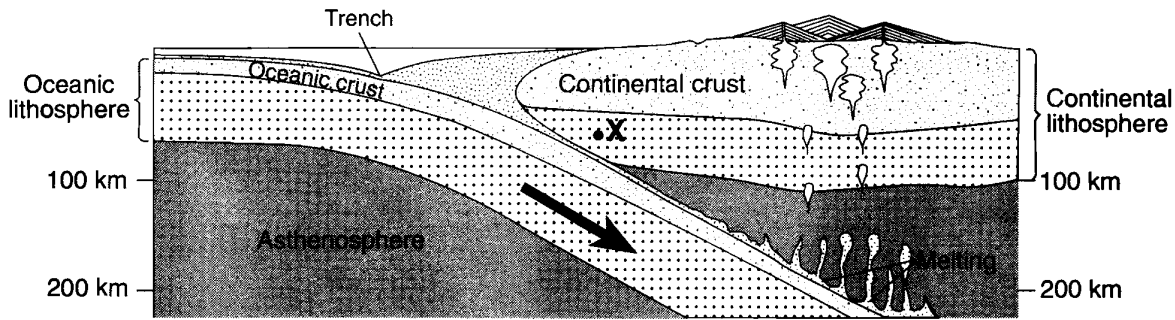
- C) **Relative Densities of Crust**

More Dense	Less Dense
C, D	A, B

- D) **Relative Densities of Crust**

More Dense	Less Dense
A, D	B, C

12. Base your answer to the following question on the cross section below, which shows the boundary between two lithospheric plates. Point *X* is a location in the continental lithosphere. The depth below Earth's surface is labeled in kilometers.



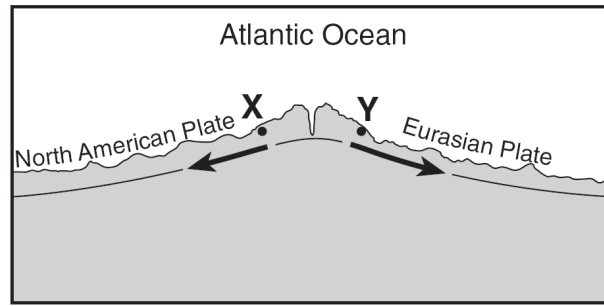
(Not drawn to scale)

The temperature of the asthenosphere at the depth where melting first occurs is inferred to be approximately

- A) 100°C B) 1300°C C) 4200°C D) 5000°C
13. What happens to the density and temperature of rock within Earth's interior as depth increases?

- A) density decreases and temperature decreases
B) density decreases and temperature increases
C) density increases and temperature increases
D) density increases and temperature decreases

14. Base your answer to the following question on cross section below, which shows an underwater mountain range in the Atlantic Ocean. The oceanic bedrock is composed mainly of basalt. Points *X* and *Y* are locations in the bedrock that have been diverging at the same rate. The movement of the North American Plate and Eurasian Plate is shown by the two arrows.



(Not drawn to scale)

Which cross section best represents the relative locations of Earth's asthenosphere, rigid mantle, and stiffer mantle? (The cross sections are not drawn to scale.)

- A) B)
- C) D)

15. Many scientists infer the composition of the Earth's core to be similar to the composition of

- A) metallic meteorites B) Moon rocks
C) the mantle D) the oceanic crust