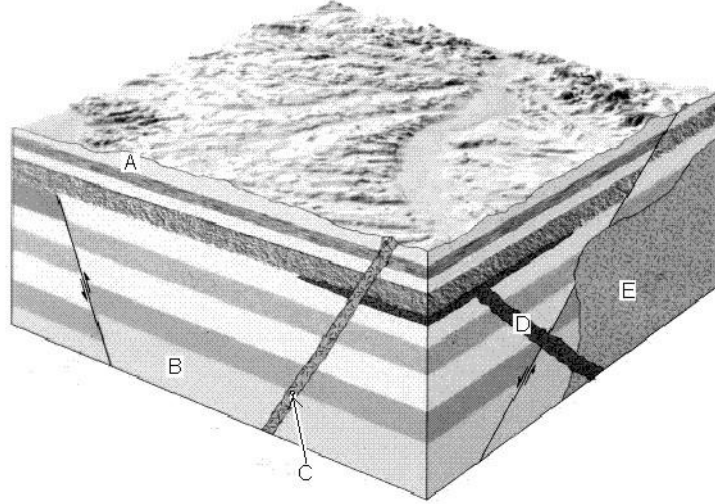


1. In the block diagram shown here, which is the oldest rock unit?

- (A)
- (B)
- (C)
- (D)
- (E)



2. Referring to the same diagram as the previous question, which of the labeled rock units is the youngest?

- (A)
- (B)
- (C)
- (D)
- (E)

3. If you could travel back in time to when the Earth first formed as a planet, how many years back in time would you have to travel?

- (A) 4 hundred years
- (B) 4 hundred-thousand years
- (C) 4 million years
- (D) 4 billion years
- (E) 4 trillion years

4. Which of the following statements do you think best describes the relationship between people and dinosaurs?

- (A) People and dinosaurs co-existed for about five thousand years
- (B) People and dinosaurs co-existed for about five hundred thousand years
- (C) Dinosaurs died out about five thousand years before people appeared on Earth
- (D) Dinosaurs died out about five hundred thousand years before people appeared on Earth
- (E) Dinosaurs died out about fifty million years before people appeared on Earth

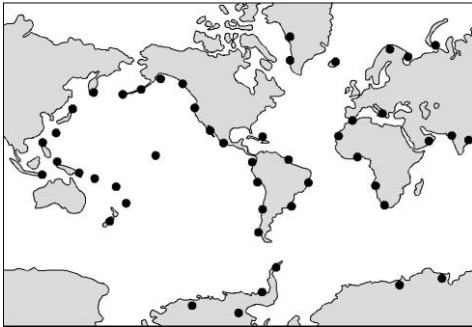
5. Some people say that radioactivity is a process that sometimes occurs on Earth. Which of the following statements about radioactivity do you think are true?
- (A) Radioactivity only occurs if carbon is present in an object
 - (B) Radioactivity can occur in the atmosphere, but not at the Earth's surface
 - (C) Radioactivity can only be created by people, such as in nuclear power plants
 - (D) Half-life is a measure of how quickly radioactivity decreases
 - (E) Half-life decays away and eventually disappears
6. Which of the following statements about the age of rocks is most likely true?
- (A) Rocks found in the ocean are about the same age as rocks found on continents
 - (B) Rocks found on continents are generally older than rocks found in the ocean
 - (C) Rocks found in the ocean are generally older than rocks found on continents
 - (D) Ages of rocks are not precise enough to determine which rock type is older
7. How far do you think continents move in a single year?
- (A) A few inches
 - (B) A few hundred feet
 - (C) A few miles
 - (D) We have no way of knowing
 - (E) Continents do not move
8. Which of the following responses best summarizes the relationship between volcanoes, large earthquakes, and tectonic plates?
- (A) Volcanoes typically occur on islands, earthquakes typically occur on continents, and both occur near tectonic plates
 - (B) Volcanoes and large earthquakes both typically occur along the edges of tectonic plates
 - (C) Volcanoes typically occur in the center of tectonic plates and large earthquakes typically occur along the edges of tectonic plates
 - (D) Volcanoes and large earthquakes both typically occur in warm climates
 - (E) Volcanoes, large earthquakes, and tectonic plates are not related, and each can occur in different places

9. Some people believe there was once a single continent on Earth. Which of the following statements best describes what happened to this continent?
- (A) Meteors hit the Earth, causing the continent to break into smaller pieces
 - (B) The Earth lost heat over time, causing the continent to break into smaller pieces
 - (C) Material beneath the continent moved, causing the continent to break into smaller pieces
 - (D) The Earth gained heat over time, causing the continent to break into smaller pieces
 - (E) The continents have always been in roughly the same place as they are today
10. The map below shows the position of the Earth's continents and oceans today. The gray areas represent land, and the white represents water. Which of the following best explains why the ocean basins look the way they do?

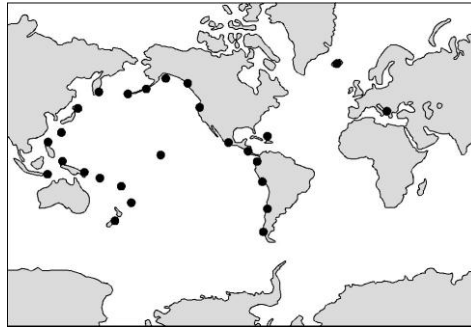


- (A) Meteor impacts caused the ocean basins to form this way
- (B) Continents moving caused the ocean basins to form this way
- (C) The Earth cooling caused the ocean basins to form this way
- (D) The Earth warming caused the ocean basins to form this way

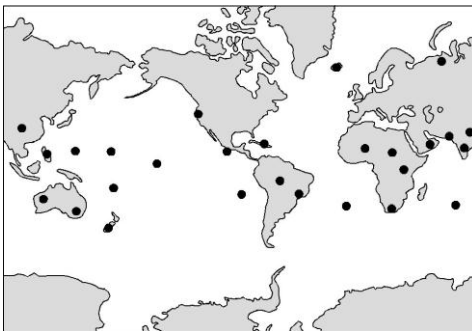
11. The following maps show the position of the Earth's continents and oceans. The ●'s on each map mark the locations where volcanic eruptions occur on land. Which map do you think most closely represents the places where these volcanoes are typically observed?



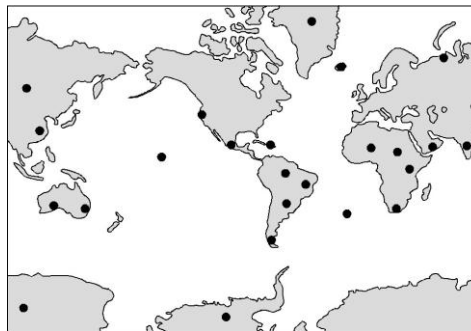
A. Mostly along the margins of the Pacific and Atlantic Oceans



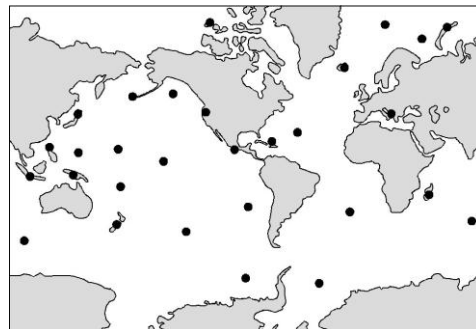
B. Mostly along the margins of the Pacific Ocean



C. Mostly in warm climates



D. Mostly on continents

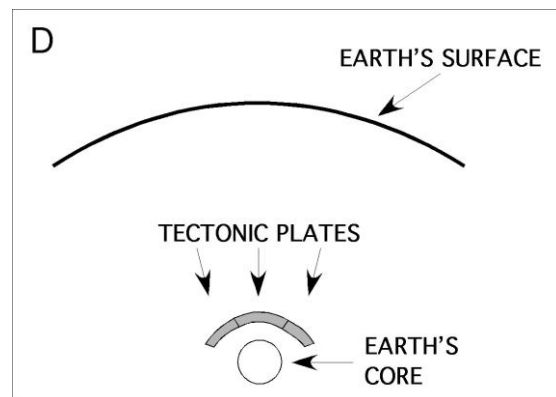
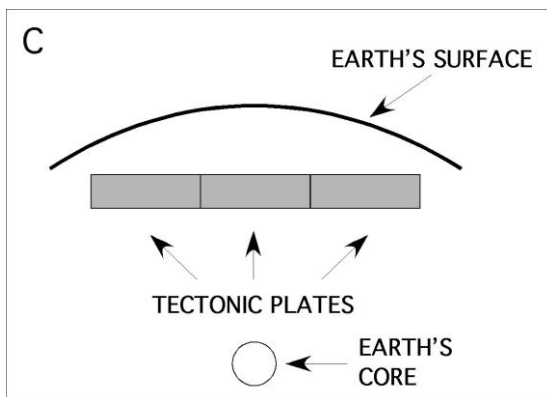
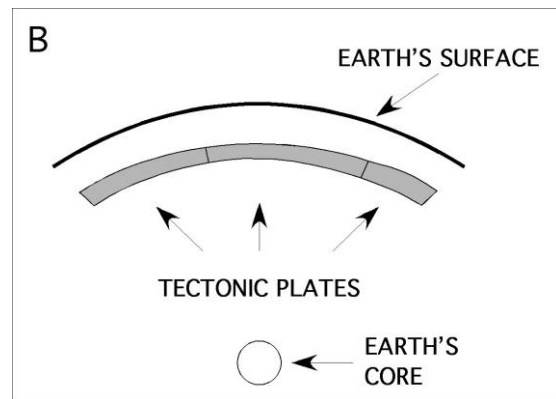
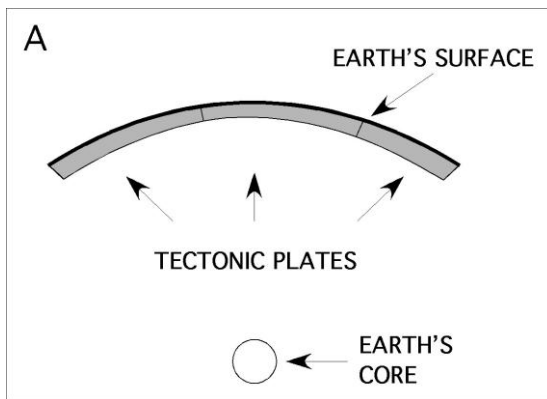


E. Mostly on islands

12. Some people believe there was once a single continent on Earth. If this single continent did exist, how long did it take for the single continent to break apart and form the arrangement of continents we see today?

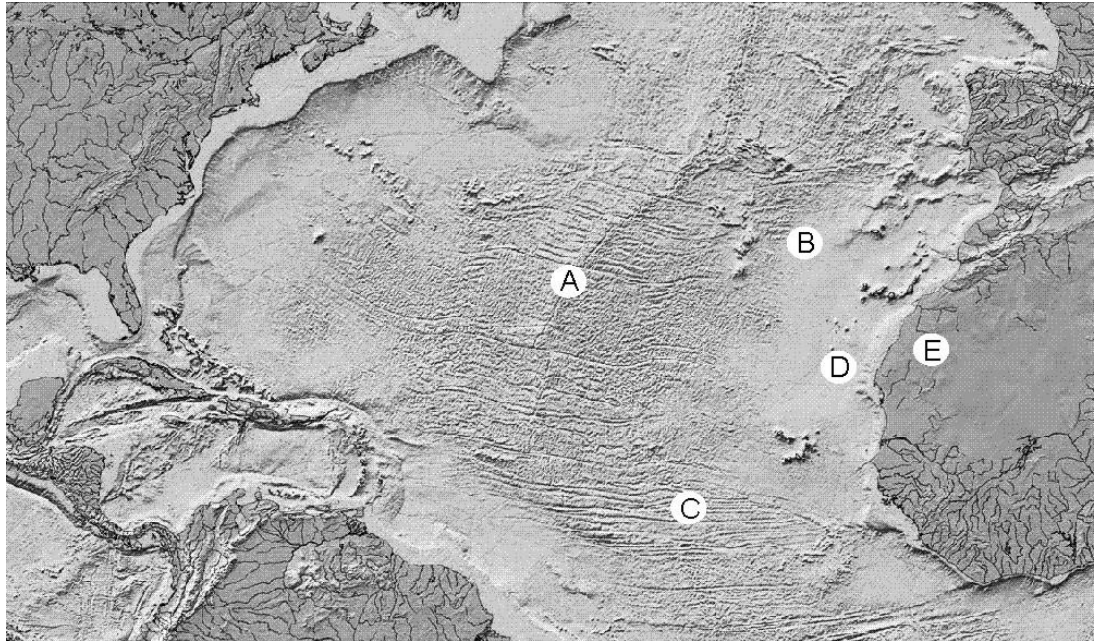
- (A) Hundreds of years
- (B) Thousands of years
- (C) Millions of years
- (D) Billions of years
- (E) It is impossible to tell how long the break up would have taken

13. Scientists often talk about the Earth's tectonic plates and their role in mountain formation, volcanism, and earthquake occurrence. Which of the following figures most closely represents the location of the Earth's tectonic plates?



14. Where on this map would you expect to find the oldest part of the ocean floor?

- (A)
- (B)
- (C)
- (D)
- (E)



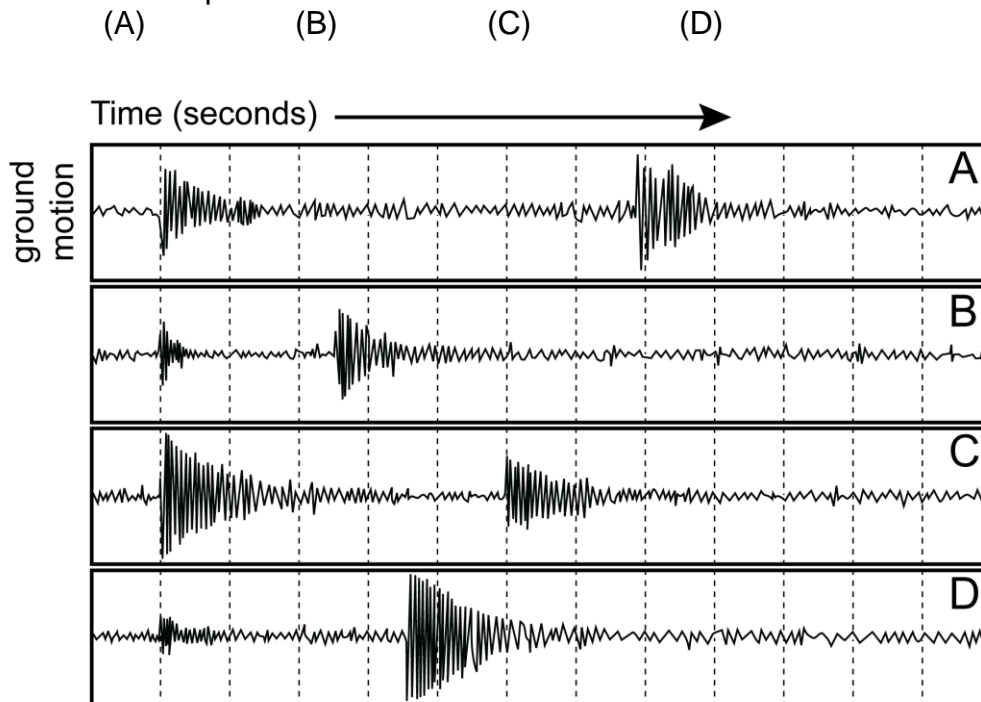
15. Which is a mineral that is common in many kinds of igneous rocks, common in many kinds of metamorphic rocks, and also common in many kinds of sedimentary rocks?

- (A) sand
- (B) iron
- (C) quartz
- (D) granite
- (E) silica

16. During the last ice age there was a large ice sheet over much of Canada and the northern U.S. What was the effect on sea levels?

- (A) Sea level was higher in all the world's oceans
- (B) Sea level was lower in all the world's oceans
- (C) Sea level was the same as today
- (D) Sea level was lower in the Arctic Ocean but the same as today in other oceans
- (E) Sea level was lower near both the North Pole and South Pole but not changed anywhere else

17. A rapidly growing city within a wet climate zone experiences a land use change from predominantly crop land to mostly urban/suburban. A likely natural response would be:
- (A) More rainwater seeping into the ground and reduced flooding
 - (B) Less rainwater seeping into the ground and increased flooding
 - (C) More rainwater seeping into the ground and increased flooding
 - (D) Less rainwater seeping into the ground and reduced flooding
 - (E) Nothing changes
18. Where is most groundwater, oil, and natural gas found?
- (A) Frozen beneath Earth's surface
 - (B) In large underground rivers
 - (C) In caverns or lakes underground
 - (D) In small spaces between rock or mineral fragments
 - (E) In small spaces between atoms making up rocks
19. Identify the seismograph plot that was recorded at a seismic station closest to where the earthquake occurred.



20. Which place on this map is most prone to violent (explosive) volcanic eruptions?

- (A) oceanic island
- (B) deep ocean basin
- (C) mountain range
- (D) along a mid-ocean ridge
- (E) along a transform fault

