UNIT 6 Key

# Grade 6 Science EOG Quiz Answer Key

Hydrology and Meteorology - (S6E3.c.) Ocean Characteristics
Geology - (S6E5.f.) Earth Surface Processes, (S6E5.j.) Conserving Natural Resources

Student Name: _____ Date: _____

Teacher Name: BRITTANY DUDEK Score: _____

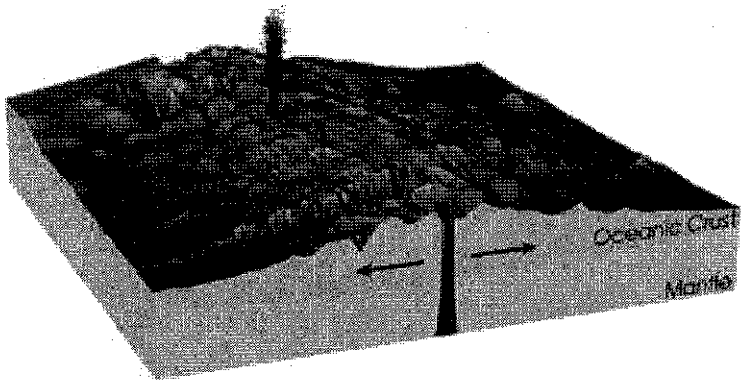
**1)** Trenches in the ocean are
- A) close to the shore.
- B) on the continental shelf.
- C) part of the intertidal zone.
- **D) the deepest part of the ocean.**

**Explanation:**
**Trenches** are the deepest part of the ocean with the Challenger Deep of the Marina Trench reaching 10,911 meters below sea level.

**2)** Sequence the seafloor features as you move from the shoreline outward into the ocean.
- A) continental slope - abyssal plain - mid-ocean ridge
- B) continental slope - continental shelf - abyssal plain
- **C) continental shelf - continental slope - abyssal plain**
- D) continental shelf - continental slope - mid-ocean ridge

**Explanation:**
**continental shelf - continental slope - abyssal plain**
The continental shelf borders a continent from shoreline to the shelf break. The ocean floor then slopes downward and then flattens out in the abyssal plain.

**3)**




On the continents, land that rises high above the ground is called a mountain. In the oceans, we call this the
- A) delta.
- B) abyssal plain.
- **C) mid-ocean ridge.**
- D) continental shelf.

**Explanation:**
Mountains on the continents are similar to the **mid-ocean ridge** underwater in the oceans on Earth.

**4)** The deepest place in the seafloor is called the

A) abyssal plain.
**B) Marianas Trench.**
C) Aleutian Trench.
D) hydrothermal vent.

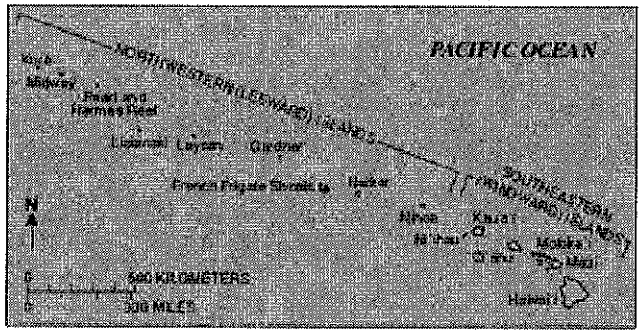
**Explanation:**
The deepest place in the seafloor is the **Marianas Trench.** It can be found in the Pacific Ocean and is over 11 km deep.

**5)** There are three major oceans on Earth. They are the

**A) Atlantic, Pacific, and Indian Oceans.**
B) Atlantic, Pacific, and African Oceans.
C) Atlantic, Arctic, and Antarctic Oceans.
D) Atlantic, Pacific, and Indonesian Oceans.

**Explanation:**
The three major oceans on Earth are the **Atlantic, Pacific, and Indian Oceans.**

**6)**




The Hawaiian Islands were formed by seamounts that rose above the ocean surface. What was the original source of the seamounts?

**A) underwater volcanoes**
B) earthquakes
C) landslides
D) faulting

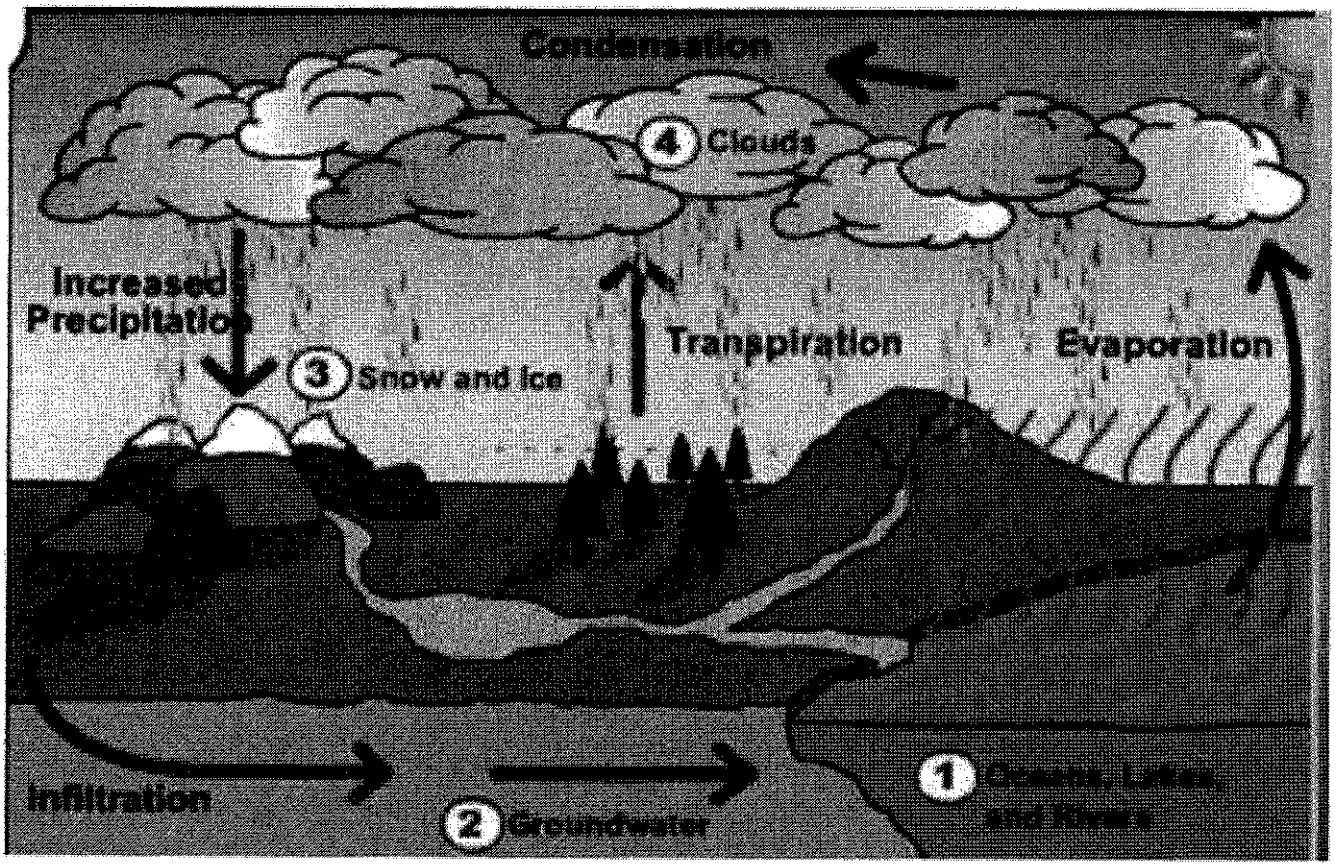
**Explanation:**
Seamounts were once **underwater volcanoes.** Volcanic eruptions that occur under oceans are called seamounts.

**7)** What statement is true about ocean trenches?

A) They are located at the rift zone.
**B) They are the deepest part of the ocean basin.**
C) They are made up of low hills and flat plains.
D) They are almost as deep as valleys found on land.

**Explanation:**
Ocean trenches are **the deepest part of the ocean basin.** They are deeper than any valley found on land.

8)

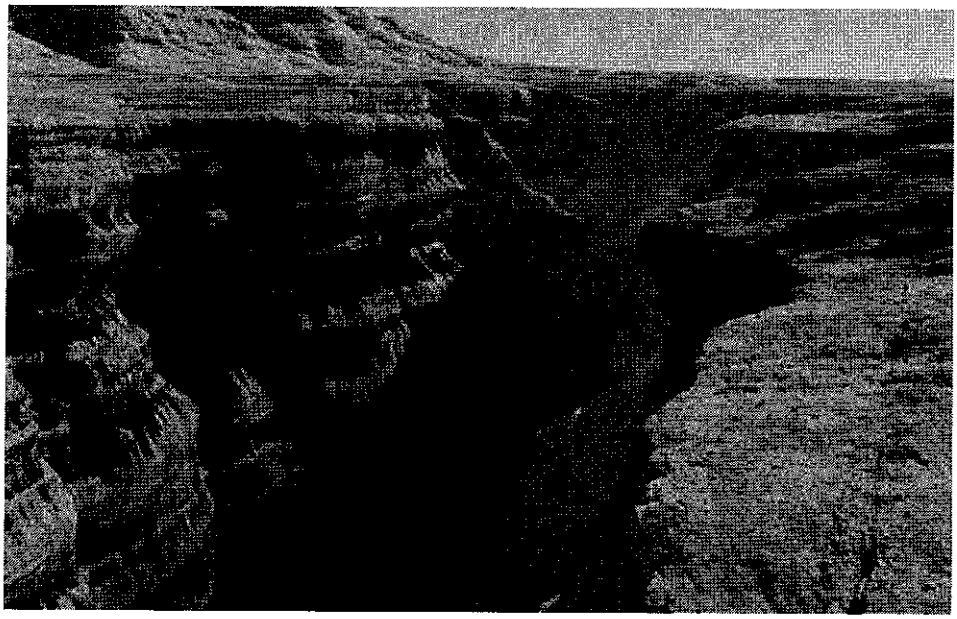



Most of the Earth's surface is covered by

A) ice.
B) land.
**C) the oceans.**
D) freshwater.

**Explanation:**
ABout 80% of the Earth's surface is covered with water and about 97% of that water is **the oceans.**

9)

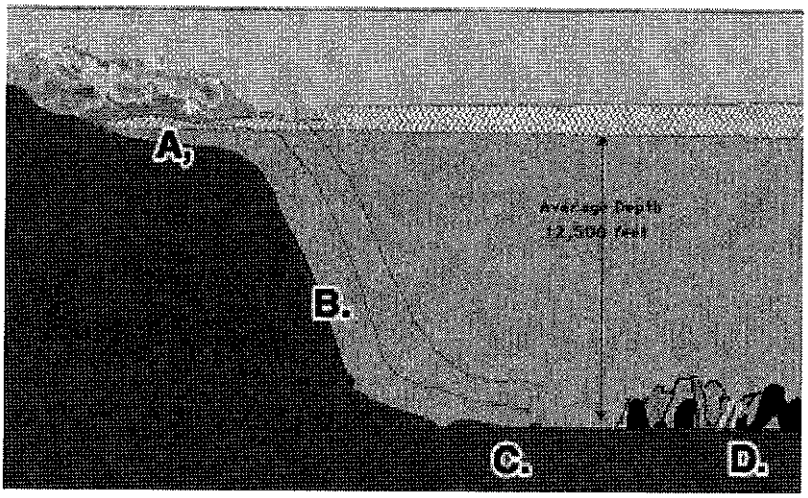


The Grand Canyon, as seen here, can be compared to a(n) _____ under the Earth's oceans.

**A) trench**
B) abyssal plain
C) mid-ocean ridge
D) continental shelf

**Explanation:**
A canyon on a continent is analogous to a **trench** within the oceans on Earth.

10)




In the picture of the ocean floor, letter B marks what landform?

A) rift zone
B) ocean basin
**C) continental slope**
D) continental shelf

**Explanation:**
Letter B marks the **continental slope**. The continental slope is the geological feature connecting the continental shelf to the bottom of the ocean.

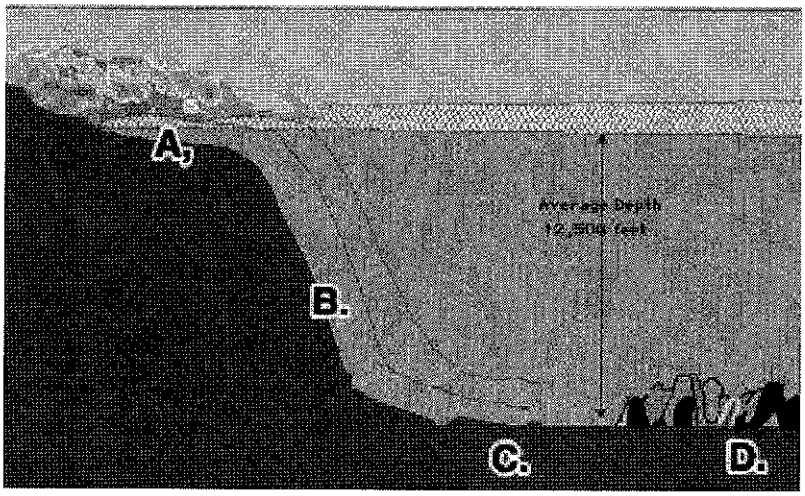
**11)**

An oceanic ridge might be compared to what continental landform?

A) delta
B) great plains
**C) mountain range**
D) mountain valley

**Explanation:**
An oceanic ridge can be compared to a continental **mountain range.**

**12)**




In the picture of the ocean floor, what landform is marked by letter A?

A) ocean basin
B) ocean trench
**C) continental shelf**

D) continental slope

**Explanation:**
Letter A marks the **continental shelf** The continental shelf is the edge of a continent that lies under the ocean. A continental shelf extends from the coastline of a continent to a drop-off point out in in the ocean.

**13)**

## Continental and Oceanic Landforms

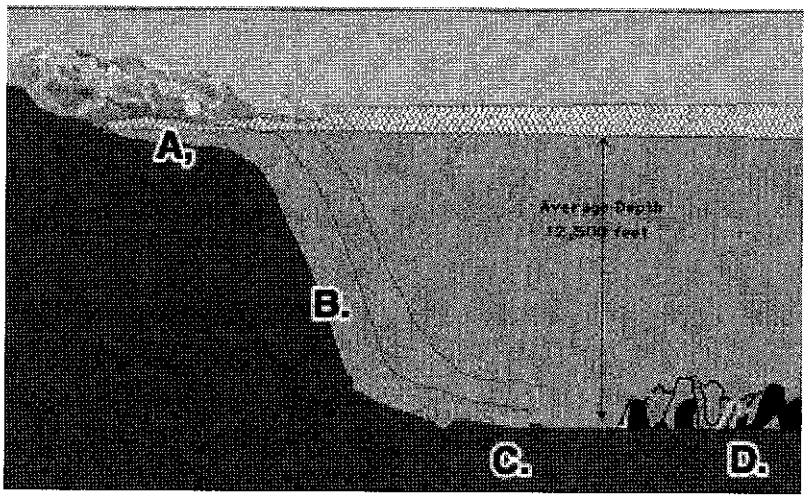
| Description | Continental | Oceanic |
|---|---|---|
| The low lying land between hills or mountains | ? | Rift zone |
| Deep valley with high steep sides | Canyon | Trench |
| Opening in Earth's crust, which allows magma, ash, and gases to escape from below | Volcano | Seamount; volcanic islands |
| Land that rises high above the ground | Mountain | Mid-ocean ridge |
| Wide, flat areas of land | Plains | Abyssal plains |

The table compares continental and oceanic landforms on Earth. What term should be used to replace the question mark in the table?

A) cavern
B) delta
C) plateau
**D) valley**

**Explanation:**
The low land between hills or mountains on continental landmasses is called a **valley.**

**14)**

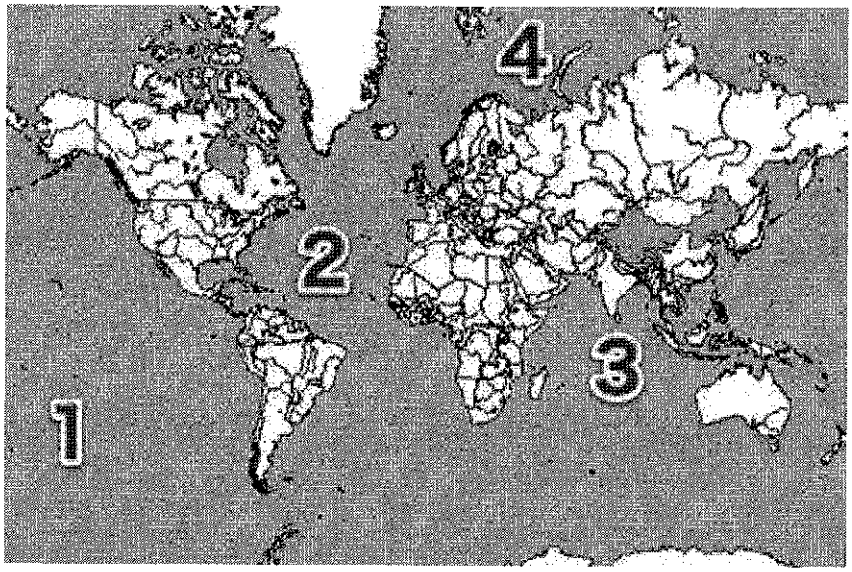



In the picture of the ocean floor, letter C marks what landform?

A) rift zone
B) ocean trench
**C) deep ocean basin**
D) continental shelf

**Explanation:**
Letter C marks the **deep ocean basin.** The deep ocean basin covers 30 % of Earth's surface and has features, such as abyssal plains, deep-sea trenches and seamounts.

**15)**

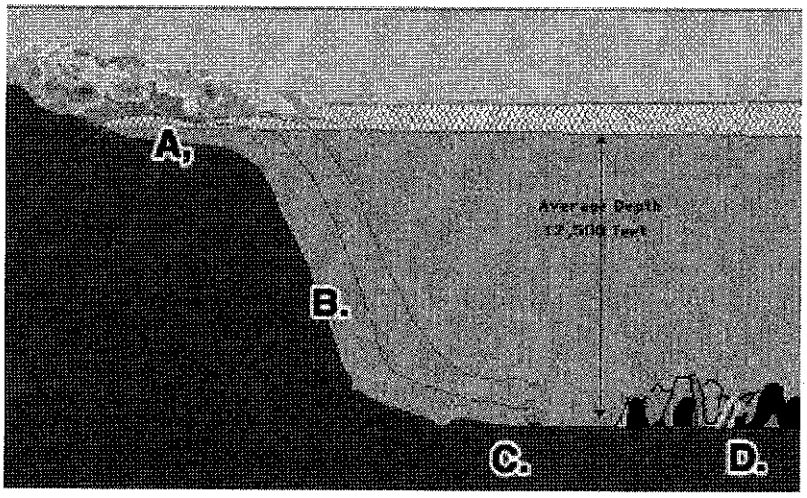



The ocean labeled 1 in the map that is located between California and Japan is called the

A) Arctic Ocean.
B) Indian Ocean.
**C) Pacific Ocean.**
D) Atlantic Ocean.

**Explanation:**
The **Pacific Ocean** separates California and Japan in the northern hemisphere.

**16)**




In the picture of the ocean floor, letter D marks what feature?

A) cavern
**B) rift zone**
C) deep ocean basin
D) continental slope

**Explanation:**
Letter D marks a **rift zone.** A rift zone is a region of the Earth's crust where plates are spreading apart. They form a steep, volcanic mountain range right next to a deep ocean trench.

**17)**

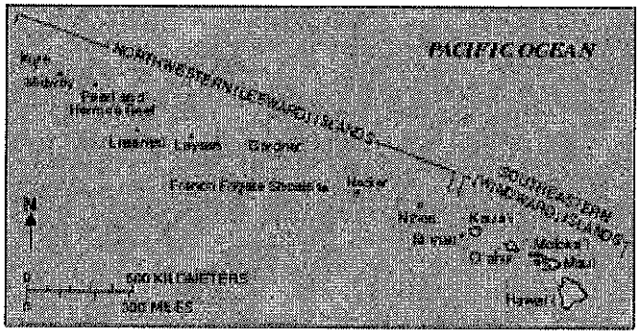
The continents do not end at the shoreline. Land forms continue under the sea extending from the continental shelf to the deep ocean floor with a vast variety of life.

Choose a list of terms describing land forms found on the ocean floor.

A) **continental shelf and slope, mid-ocean ridge, rift zone, trench, and the ocean basin**
B) continental rise and shelf, continent, ridge, canyon, trench, and typhoon
C) tectonic plates, continental slope, island, mountain, reef, and the ocean barrier
D) continental shelf, ocean basin, mountain ridge, rise, and tidal wave

**Explanation:**
**continental shelf and slope, mid-ocean ridge, rift zone, trench, and the ocean basin** This list is correct because these terms are geologic landforms of the ocean floor.

**18)**




Volcanic eruptions that begin under ocean waters, rise up, and form islands, like the Hawaiian islands, are called _____.

A) deltas
B) dunes
**C) seamounts**
D) shields

**Explanation:**
**Seamounts** were once underwater volcanoes that rose up above the ocean waters creating islands.

**19)** In the ocean, what is a landform similar to a valley known as?

**A) It is known as a rift.**
B) It is known as the ocean basin.
C) It is known as the mid-ocean ridge.
D) It is known as an underwater valley.

**Explanation:**
**It is known as a rift.** A rift is a narrow trench located in the center of the highest part of the mid-ocean ridge. It looks similar to a valley. The mid-ocean ridge is an underwater volcanic mountain range.

**20)** How can you BEST describe the continental shelf?

A) The continental shelf is very deep.
B) The continental shelf is the same width around the edges of the continents.
C) The continental shelf is the part of the continent located above the water.
**D) The continental shelf is an extension of the continent under the ocean water.**

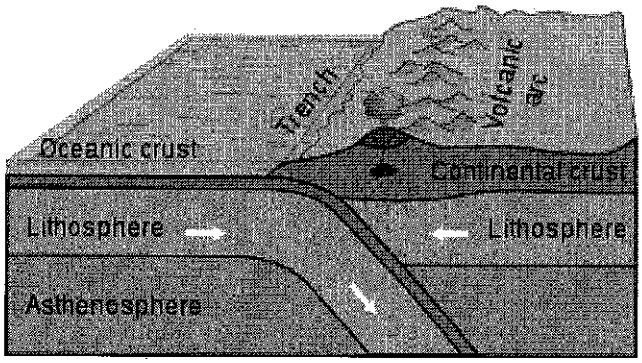
**Explanation:**
The edges of the continents slope down from the shore into the ocean. **The continental shelf is an extension of the continent under the ocean water.**

**21)** 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.

**Explanation:**
The movement of the Earth's tectonic plates is caused by **convection currents in Earth's mantle**. Differences in temperature within the layers of the Earth cause convection cells to develop in the semi-molten mantle.

**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.

**Explanation:**
Subduction zones and their resulting features are all evidence for the **theory of plate tectonics.**
Geologists have noted that earthquakes and volcanoes occur in specific patterns throughout the world. These pattern lines follow the boundaries of the seven lithospheric plates and provide further evidence for the movement of these plates, or the theory of plate tectonics.

**23)** The 2004 Indian Ocean tsunami was caused by a shift in two plates that pushed one section of the sea floor under another section of the sea floor by 5 meters. What type of boundary is this?

A) divergent
B) transform
**C) convergent**
D) metamorphic

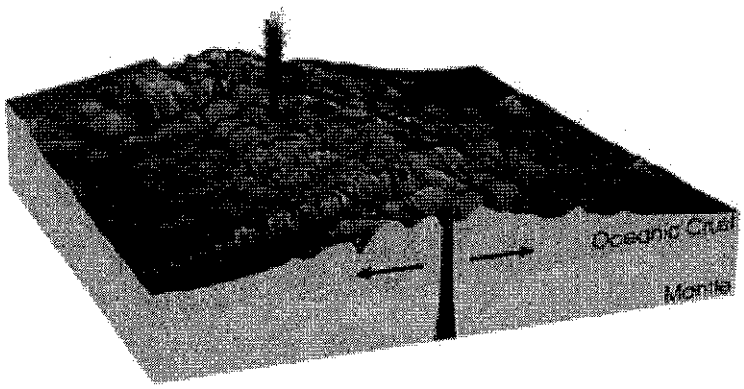
**Explanation:**
**Convergent** faulting often leads to one plate being forced underneath the other as the two plates press together.

**24)** Ronald observes a large island off the coast of Indonesia, on a map. A few months later, he observes that there are many smaller islands in place of the large one he had seen earlier. Which of these could have caused this change?

A) a tsunami
B) a mudslide
C) wind erosion
**D) volcanic eruption**

**Explanation:**
Massive **volcanic eruptions** on an island may cause a large amount of magma to come to the surface. This leads to a decrease in pressure inside the magma chamber beneath the island. The magma chamber may not be able to withstand the load of the landmass above it. As a result, the whole island gets submerged in the ocean. Only a few areas of high level land on the island may rise above the surface of the ocean to form small islands.

**25)**



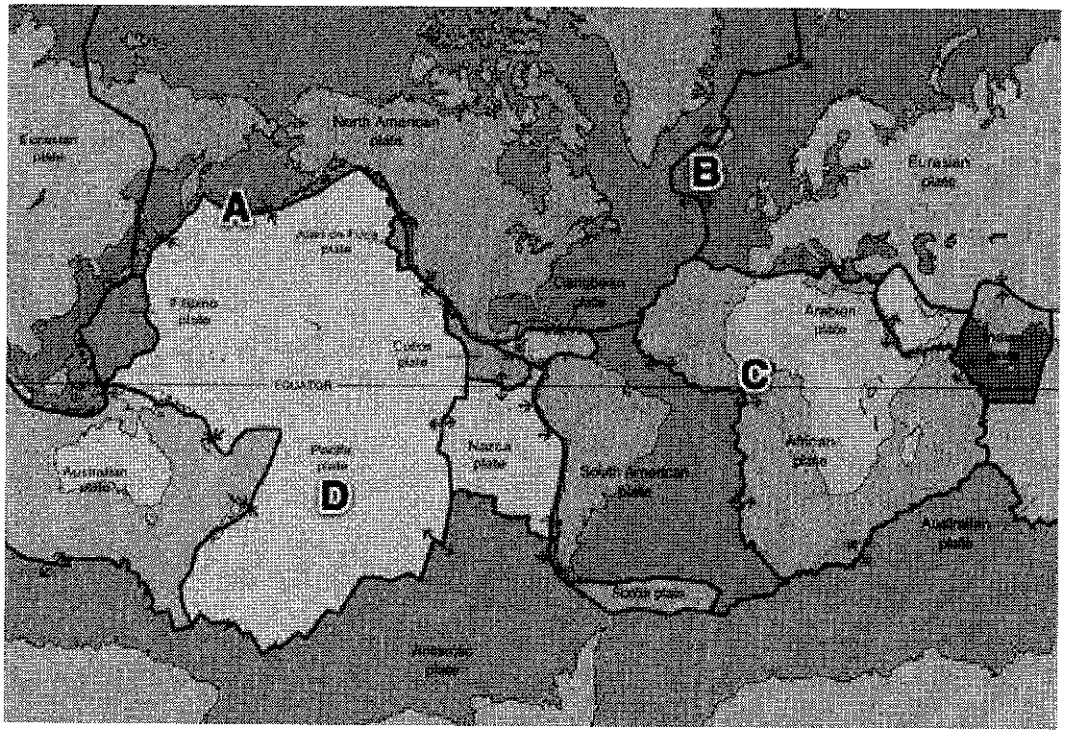

What is the action force responsible for seafloor spreading?

A) the destruction of ocean crust in trenches
**B) the intrusive of magma forced up toward the ocean ridge**
C) the force of the ocean crust sitting on the asthenosphere
D) the differences in mass of the ocean and continental plates

**Explanation:**
**the intrusive of magma forced up toward the ocean ridge**

Convection currents in the asthenosphere force hot, less dense magma upward toward the crust. The action of the magma pushes apart the crust at the ridge and the magma fills in the gap that has been created as the sea floor spreads.

**26)**

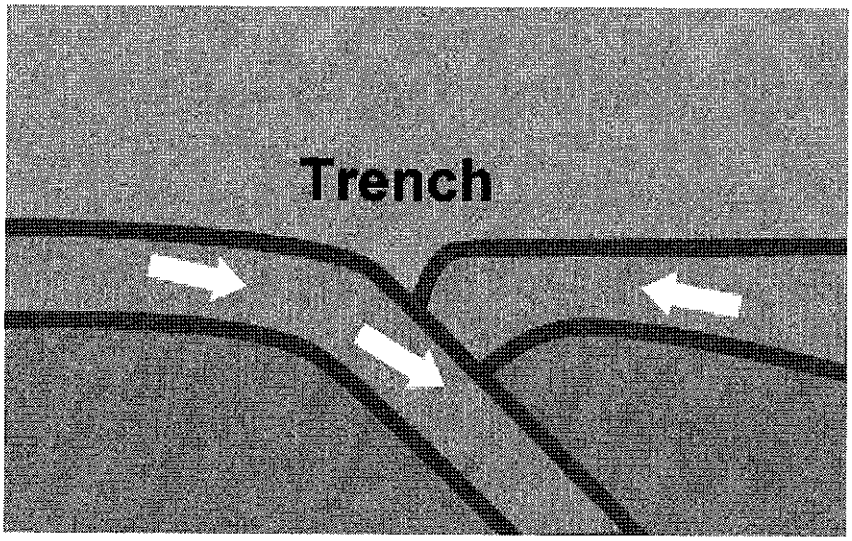



Which is the MOST LIKELY location of sea floor spreading?

A)
**B)**
C)
D)

**Explanation:**
The North American plate is moving away from the Eurasian plate. The place where they meet, location **B**, is the sight of seafloor spreading. This is where two plates are spreading apart. Magma is constantly rising from underneath to fill in the gap.

27)




The Marianas Trench, where the Pacific Plate descends under the leading edge of the Eurasian Plate, is the deepest sea floor in the world. These ocean trenches form when two oceanic plates collide

A) **and the younger, less dense of the two plates rides over the edge of the older plate.**
B) and the younger, denser of the two plates, rides over the edge of the older plate.
C) when convection currents in the mantle force the older plate downward.
D) and the plates are approximately the same age and density.

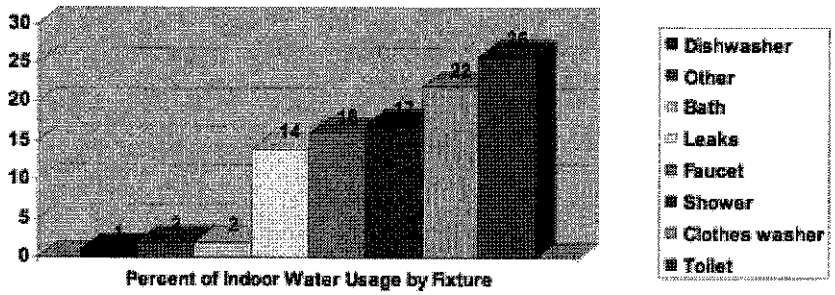
**Explanation:**
These ocean trenches form when two oceanic plates collide **and the younger, less dense of the two plates rides over the edge of the older .**

**28)** _____ is a process that occurs at mid-ocean ridges, where new oceanic crust is formed through volcanic activity and gradually moves away from the ridge.

A) Divergence
B) Subduction
**C) Spreading**
D) Convergence

**Explanation:**
**Seafloor spreading** is a process that occurs at mid-ocean ridges, where new oceanic crust is formed through volcanic activity and gradually moves away from the ridge.

**29)**




Jonathan is learning about water conservation. He learns that the average household in the United States uses 293 gallons of water per day. Jonathan makes a chart that shows the percent of water that each indoor fixture uses in the average U.S. household. He would like to use this chart to determine which indoor fixture uses the most water. Then, he can replace this fixture with a more efficient, water-saving fixture. According to the chart, which indoor fixture should Jonathan replace with a more efficient, water-saving fixture?

A) shower
B) faucet
**C) toilet**
D) clothes washer

**Explanation:**
Jonathan made this chart based on what percent of 293 gallons of water per day each indoor fixture uses in the average household. He wants to replace the fixture that uses the most water with a more efficient, water-saving fixture. To find this, you should look at the percent amounts above each bar. The toilet has the largest bar, and the percent of water it uses is the largest. Therefore, Jonathan should replace the **toilet** with a more efficient, water-saving fixture to save water.

**30)** Which method would save the MOST water?

A) Turn off the water while brushing your teeth.
B) Remove plants and other vegetation from your yard.
C) Wash cars with a hose rather than a bucket of water.
**D) Run only full loads in the washing machine and dishwasher.**

**Explanation:**
**Running only full loads in the washing machine and dishwasher** can save 300 to 800 gallons of water per month.