

## 4.2 Assessment

Match each geological feature or process on the left with the plate boundary or boundaries it is associated with on the right. A geological feature or process can be present at more than one type of plate boundary.

Geological Feature or Process	Plate Boundary
1. ___ subduction	A. divergent plate boundary
2. ___ plate separation	B. convergent plate boundary
3. ___ mountain formation	C. transform plate boundary
4. ___ creation of new crust	
5. ___ plates sliding past one another	
6. ___ plate collision	
7. ___ deep sea trenches	
8. ___ volcanoes	
9. ___ mid-ocean ridge	
10. ___ earthquakes	
11. ___ continental rifting	
12. ___ sea floor spreading	

Circle the letter of the best answer for questions 13 to 24.

13. Which of the following best describes the lithosphere?

- A. It comprises of only the crust.
- B. It comprises of only mantle material.
- C. It comprises of crust and part of the upper mantle.
- D. It comprises of parts of all of Earth's layers.

14. Which of the following best describes the asthenosphere?

- A. The material that makes up tectonic plates.
- B. A material that flows.
- C. Partially melted crust.
- D. Liquid outer core.

15. Which statement best describes the relationship between the lithosphere and asthenosphere?
- A. The lithosphere and asthenosphere are fused (joined) together.
  - B. The lithosphere and asthenosphere do not interact.
  - C. The asthenosphere floats on the lithosphere.
  - D. The lithosphere is broken into tectonic plates that float on the asthenosphere.
16. At a divergent plate boundary,
- A. subduction occurs
  - B. sea floor spreading occurs
  - C. plates collide
  - D. deep sea trenches form
17. At a convergent plate boundary,
- A. subduction occurs
  - B. rifts are present
  - C. plates move apart
  - D. new oceanic crust is made
18. At a transform plate boundary,
- A. subduction occurs
  - B. there are volcanoes
  - C. plates slide past each other
  - D. mid-ocean ridges form
19. Deep sea trenches
- A. form at subduction zones
  - B. form at convergent plate boundaries
  - C. are the deepest parts of the oceans
  - D. All of the statements are correct

20. Subduction occurs
- A. when plates slide past each other
  - B. when tectonic plates are not moving
  - C. at mid-ocean ridges
  - D. when dense crust goes below less dense crust
21. The movement of tectonic plates
- A. can be measured using satellites
  - B. is measured in cm/year
  - C. causes plates to interact
  - D. All of the statements are correct
22. Which statement best describes convection?
- A. Cool fluid rises, while warm fluid sinks.
  - B. Warm fluid stays at the surface, while cool fluid stays at the bottom.
  - C. Warm fluid rises, while cool fluid sinks.
  - D. Cool fluid stays at the surface, while warm fluid stays at the bottom.
23. Which statement best describes slab pull?
- A. Occurs at subduction zones.
  - B. Leading edge of plate pulls rest of plate down.
  - C. Gravity assists with plate movement.
  - D. All of the statements are correct.
24. Which statement best describes ridge push?
- A. Occurs where convection is moving mantle material down.
  - B. Occurs at convergent plate boundaries.
  - C. Pushes tectonic plates apart.
  - D. All of the statements are correct.