

Chapter: **Dynamic Earth**

Answer the questions that follow.

1. Which feature is NOT associated with an increase in chemical weathering?

- Ⓐ oxidation
- Ⓑ abrasion
- Ⓒ acidic rain
- Ⓓ warm climate

For questions 2, 3, and 4, refer to the following passage and illustration.

In this group of questions, you will use your knowledge about mangroves and the processes that change Earth's surface to answer three questions.

The Mighty Mangrove Protectors

Florida has laws to protect mangroves. Julio doesn't understand why they should be protected. He says the thick mangrove forests block beautiful ocean views. Julio feels that these forests do not serve any purpose and should be cut down.



One day, a strong hurricane eroded part of the shoreline. Many homes were destroyed by huge waves. Animal habitats were also destroyed. However, the areas with mangroves were not damaged by the hurricane as badly as other areas. Julio realized that mangrove forests are important as they not only protect the coastline, but they also provide homes and other basic needs for many types of organisms

2. What **most likely** caused the damage to the shoreline and the homes?

- (F) moraines
- (G) levees
- (H) surges
- (I) longshore currents

3. What is one reason mangrove trees can protect shorelines from hurricanes?

- Ⓐ Mangroves are not susceptible to erosion.
- Ⓑ Mangroves provide complete protection from flooding.
- Ⓒ The low-growing roots slow the flow of incoming waves.
- Ⓓ Their root system helps anchor the soil, reducing erosion.

4. Look at the structure of the root system of the mangroves. What other benefits do they provide?
- Ⓕ If mangroves are present, groins do not need to be built.
 - Ⓖ They offer nutrients and shelter to many species.
 - Ⓗ They are not affected by climate change.
 - Ⓘ They protect against chemical weathering.

5. Which two landforms have the most attributes in common?

- Ⓐ sink holes and caves
- Ⓑ wetlands and glaciers
- Ⓒ hoodoos and stalagmites
- Ⓓ deltas and barrier islands

6. Deposition can cause many types of landforms.



What is the name of the landform in Figure A, and how is it formed?

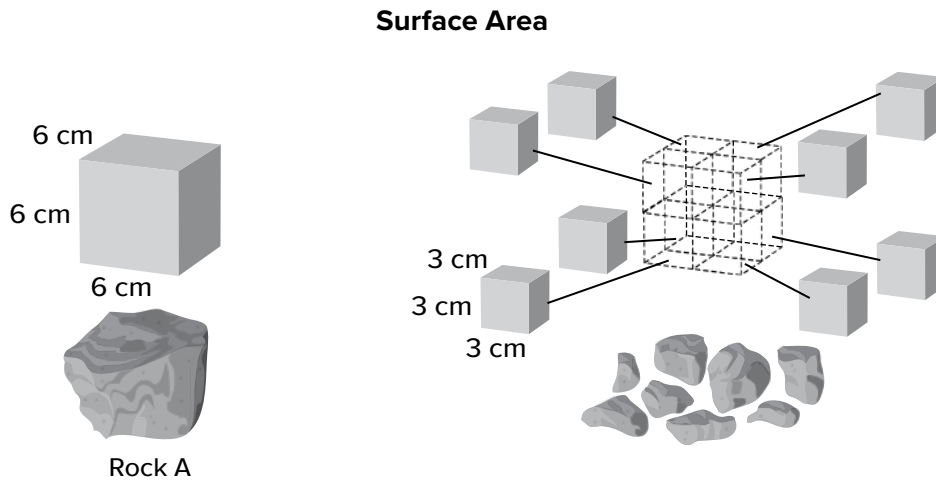
- Ⓕ This is an outwash, which is formed from the mass wasting of a glacier.
- Ⓖ This is a till, which is formed when a glacier melts.
- Ⓗ This is a moraine, which is formed when till piles up in front of a glacier.
- Ⓘ This is a sand dune, which is formed when the wind blows till into piles.

For questions 7 and 8, refer to the information and illustration below.

To calculate the area (A) of a rectangle, use the following formula: $A = L \times W$.

The surface area (SA) is the sum of the areas of all 6 sides. $SA = A \times 6$

A rock broken into 8 pieces has a total of 48 sides.



7. If Rock A broke into 8 pieces, what would be the total surface area (SA)?

- (A) 36 cm².
- (B) 54 cm².
- (C) 216 cm².
- (D) 432 cm².

8. If Rock A were to break into a different number of pieces, which number of pieces would **most likely** weather the fastest?
- Ⓕ 16 pieces
 - Ⓖ 12 pieces
 - Ⓗ 8 pieces
 - Ⓘ 4 pieces

9.

ROCK RESHAPING



What **most likely** caused the rocks in the pictures to change appearance?

- ☐ (A) wind erosion
- ☐ (B) mass wasting
- ☐ (C) sorting
- ☐ (D) rounding

