

RM8 JRQ

Name_____

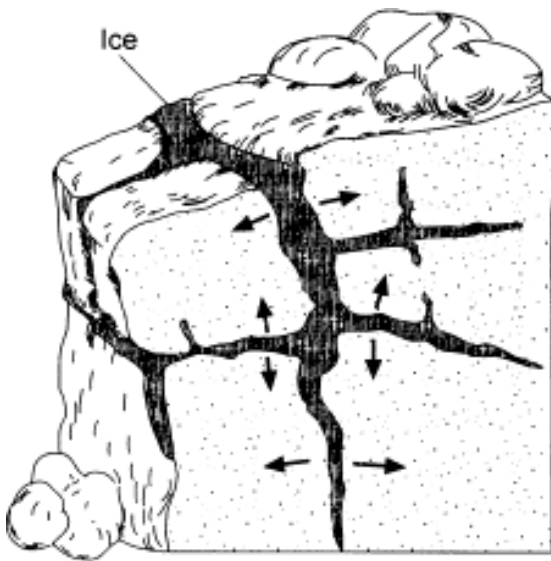
1. Which factor has the greatest influence on the weathering rate of Earth's surface bedrock?

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|-------------------------------|------------------------------|
| 1. local air pressure | 3. age of the bedrock |
| 2. angle of insolation | 4. regional climate |

2. Which geologic feature is caused primarily by chemical weathering?

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|--|---|
| 1. large caves in limestone bedrock | 3. blocks of basalt at the base of a steep slope |
| 2. a pattern of parallel cracks in a granite mountain | 4. the smooth, polished surface of a rock in a dry, sandy area |

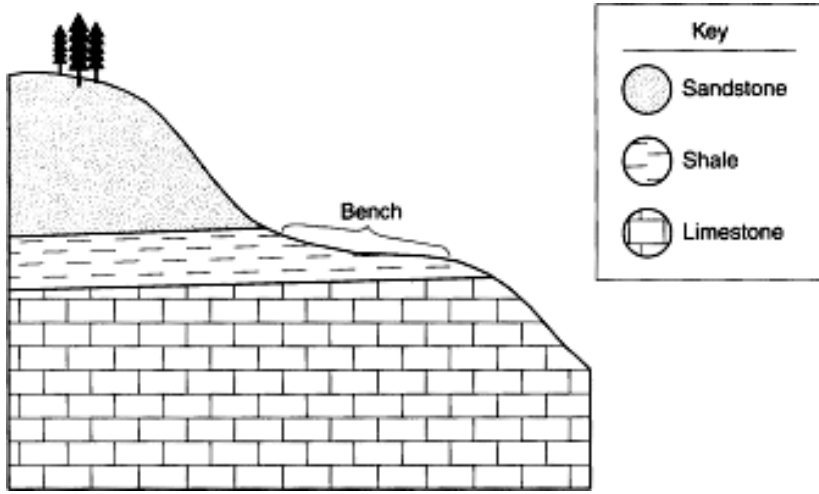
3. The accompanying diagram shows granite bedrock with cracks. Water has seeped into the cracks and frozen. The arrows represent the directions in which the cracks have widened due to weathering. Which statement best describes the physical weathering shown by the diagram?



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|---|--|
| 1. Enlargement of the cracks occurs because water expands when it freezes. | 3. The cracks become wider because of chemical reactions between water and the rock. |
| 2. This type of weathering occurs only in bedrock composed of granite. | 4. This type of weathering is common in regions of primarily warm and humid climates. |

4. The geologic cross section (see image) shows a hillslope and the rock layers that underlie it.

Which difference between the sandstone, shale, and limestone layers caused the formation of the relatively gently sloped section labeled "bench"?



1. rock age
2. fossil content

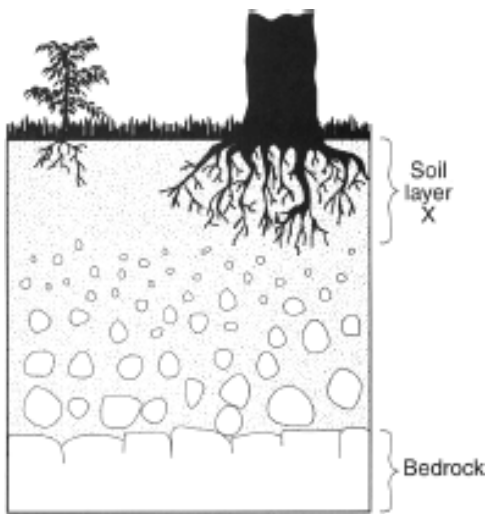
3. resistance to weathering
4. amount of uranium-238

5. Which activity demonstrates chemical weathering?

1. freezing of water in the cracks of a sandstone sidewalk
2. abrasion of a streambed by tumbling rocks
3. grinding of talc into a powder
4. dissolving of limestone by acid rain

6. The accompanying cross section shows soil layer X, which was formed from underlying bedrock.

Which change would most likely cause soil layer X to increase in thickness?

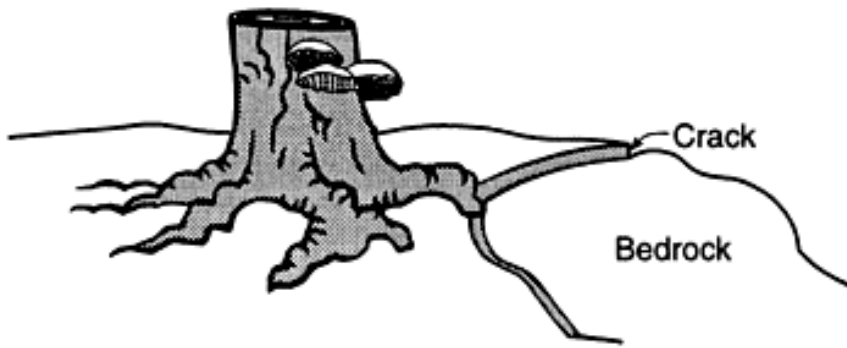


1. a decrease in slope
2. a decrease in rainfall

3. an increase in biologic activity
4. an increase in air pressure

7. The diagram shows the stump of a tree whose root grew into a small crack in bedrock and split the rock apart.

The action of the root splitting the bedrock is an example of



1. chemical weathering

3. erosion

2. deposition

4. physical weathering

8. Base your answer on the accompanying cross section and block diagram. The cross section shows an enlarged view of the stream shown in the block diagram. The sediments in the cross section are drawn to actual size. Arrows show the movement of particles in the stream. The block diagram represents a region of Earth's surface and the bedrock beneath the region.

What process is responsible for producing the rounded shape of the particles shown on the stream bottom in the cross section? [1]

