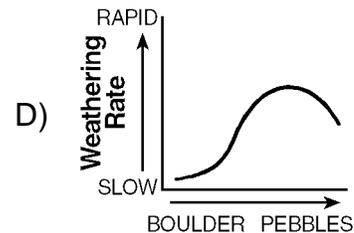
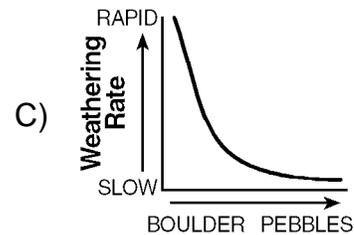
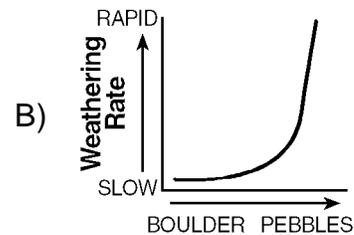
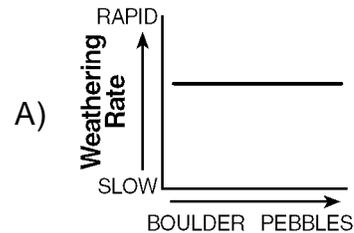


## Weathering &amp; Erosion by Mass Wasting Pre-Test

Name: \_\_\_\_\_

- 1) As a particle of sediment in a stream breaks into several smaller pieces, the rate of weathering of the sediment will
- increase due to a decrease in surface area
  - decrease due to an increase in surface area
  - increase due to an increase in surface area
  - decrease due to a decrease in surface area
- 2) Which substance has the *greatest* effect on the rate of weathering of rock?
- |             |             |
|-------------|-------------|
| A) hydrogen | C) water    |
| B) argon    | D) nitrogen |

- 3) Which graph *best* represents the chemical weathering rate of a limestone boulder as the boulder is broken into pebble-sized particles?

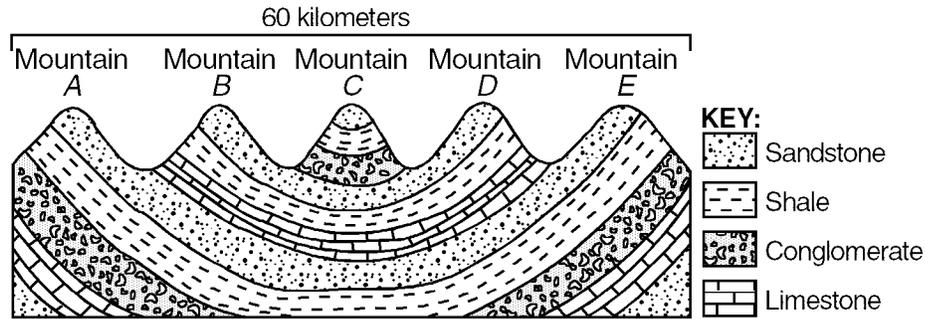


- 4) Chemical weathering of rocks occurs most rapidly in a climate that is
- hot and arid
  - cold and arid
  - cold and humid
  - hot and humid
- 5) A landscape having which climate would be influenced by the fewest types of weathering and erosional agents?
- arid
  - glacial
  - humid tropical
  - subarctic

6) Solid bedrock is changed to soil primarily by the process of

- A) erosion
- B) transpiration
- C) infiltration
- D) weathering

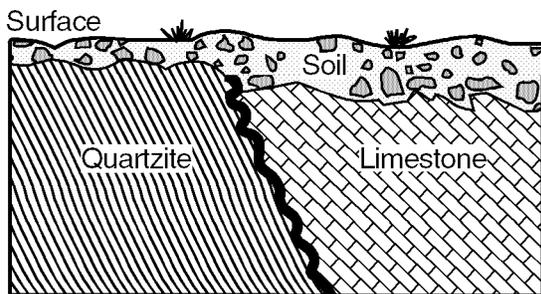
7) The diagram below represents a geologic cross section of a portion of the Earth's crust. The rock layers have not been overturned.



Which type of rock appears to be most resistant to weathering?

- A) conglomerate
- B) shale
- C) sandstone
- D) limestone

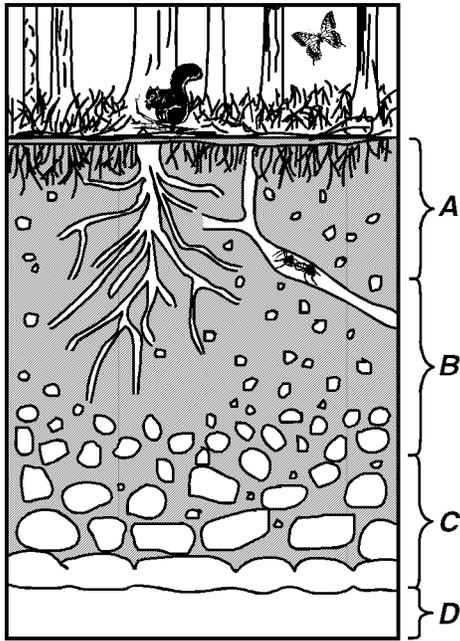
8) The cross section below shows residual soils that developed on rock outcrops of metamorphic quartzite and sedimentary limestone.



Which statement *best* explains why the soil is thicker above the limestone than it is above the quartzite?

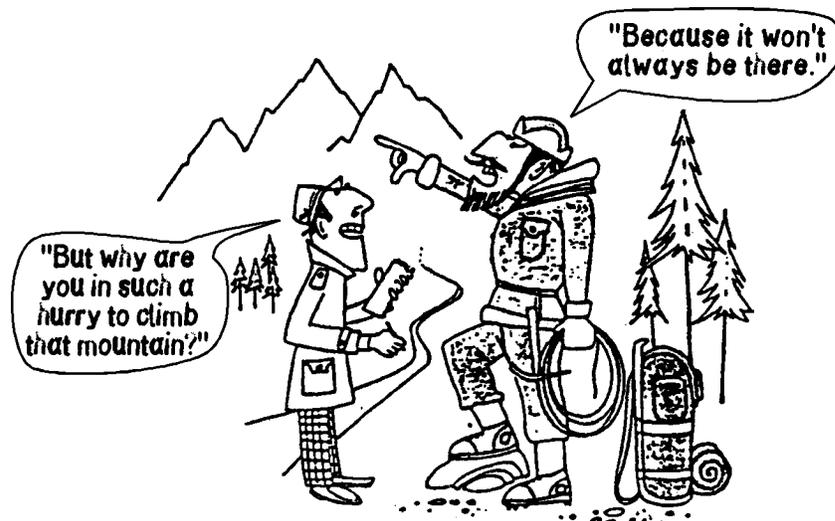
- A) The limestone is less resistant to weathering than the quartzite.
- B) The quartzite is older than the limestone.
- C) The limestone is thicker than the quartzite.
- D) The quartzite formed from molten magma.

- 9) The diagram below shows a residual soil profile formed in an area of granite bedrock. Four different soil horizons, A, B, C, and D, are shown.



Which soil horizon contains the *greatest* amount of material formed by biological activity?

- |      |      |
|------|------|
| A) A | C) C |
| B) B | D) D |
- 12) In the cartoon below, the mountain climber's remarks show that he is aware of which pair of Earth processes?



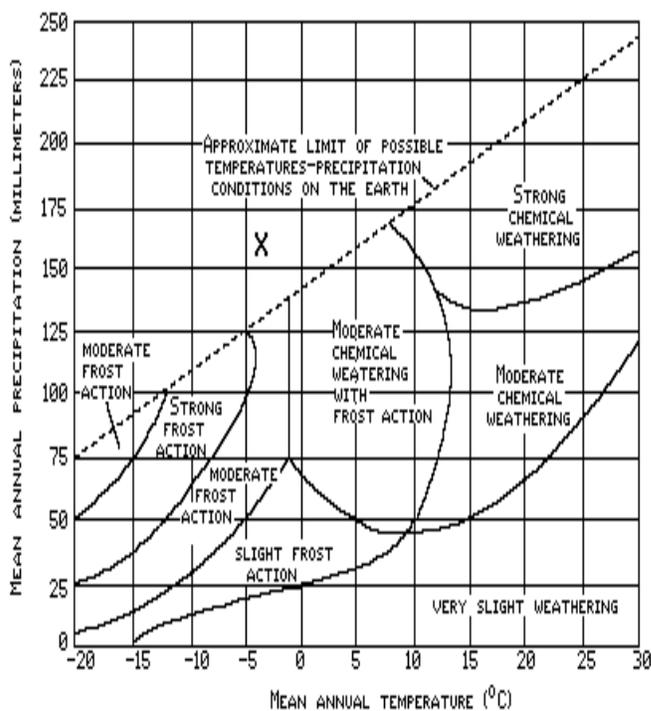
- |                           |                                 |
|---------------------------|---------------------------------|
| A) folding and faulting   | C) compaction and uplifting     |
| B) weathering and erosion | D) deposition and sedimentation |

- 10) On the Earth's surface, transported materials are more common than residual materials. This condition is mainly the result of
- folding
  - recrystallization
  - erosion
  - subduction
- 11) The *best* evidence that erosion has taken place would be provided by
- tilted rock layers observed on a mountain
  - faulted rock layers observed on a plateau
  - deep residual soil observed on a hillside
  - sediment observed at the bottom of a cliff

- 13) Which factor has the *least* effect on the weathering of a rock?
- exposure of the rock to the atmosphere
  - composition of the rock
  - the number of fossils found in the rock
  - climatic conditions
- 14) At high elevations in New York State, which is the most common form of physical weathering?
- alternate freezing and melting of water
  - abrasion of rocks by the wind
  - oxidation by oxygen in the atmosphere
  - dissolving of minerals into solution
- 15) Which is the best example of physical weathering?
- the formation of a sandbar along the side of a stream
  - the reaction of limestone with acid rainwater
  - the cracking of rock caused by the freezing and thawing of water
  - the transportation of sediment in a stream

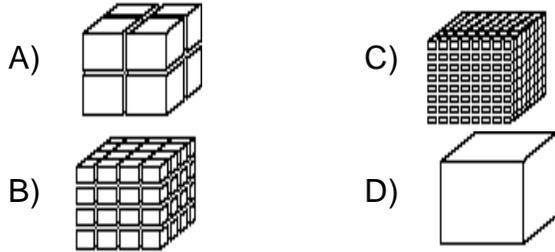
Questions 16 through 18 refer to the following:

The diagram below represents the dominant type of weathering for various climatic conditions.

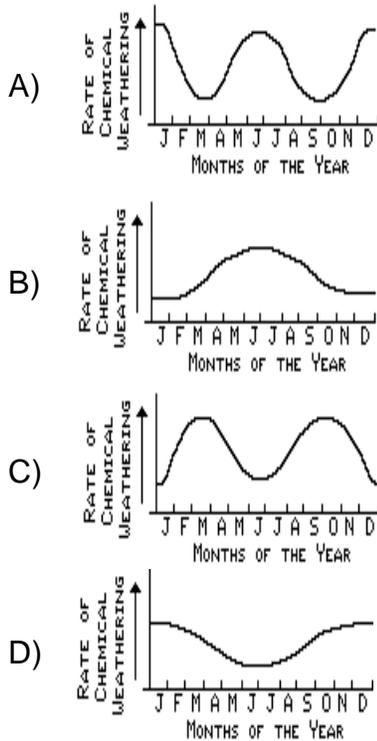


- 16) Why is no frost action shown for locations with a mean annual temperature greater than  $13^{\circ}\text{C}$ ?
- Large amounts of precipitation fall at these locations.
  - Large amounts of evaporation takes place at these locations.
  - Very little precipitation falls at these locations.
  - Very little freezing takes place in these locations.

- 17) Four samples of the same material with identical composition and mass were cut as shown in the diagrams below. When subjected to the same chemical weathering, which sample will weather at the fastest rate?



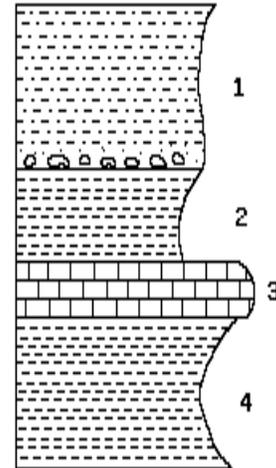
- 18) Assume that the rate of precipitation throughout the year is a constant. Which graph would most probably represent the chemical weathering of most New York State bedrock?



- 19) A large rock is broken into several smaller pieces. Compared to the rate of weathering of the large rock, the rate of weathering of the smaller pieces is

- A) less
- B) greater
- C) the same

- 20) The diagram below represents a sedimentary rock outcrop.



Which rock layer is the most resistant to weathering?

- A) 2
- B) 4
- C) 3
- D) 1

- 21) Which erosional force acts alone to produce avalanches and landslides?

- A) gravity
- B) winds
- C) sea waves
- D) running water

- 1) C
- 2) C
- 3) B
- 4) D
- 5) B
- 6) D
- 7) C
- 8) A
- 9) A
- 10) C
- 11) D
- 12) B
- 13) C
- 14) A
- 15) C
- 16) D
- 17) C
- 18) B
- 19) B
- 20) C
- 21) A