The diagram below represents the present number of decayed and undecayed atoms in a sample that was originally 100% radioactive material.

If the half-life of the radioactive material is 1,000 years, what is the age of the sample represented by the diagram?

(1) 1,000 yr  
(2) 2,000 yr  
(3) 3,000 yr  
(4) 4,000 yr
According to the map, in which two present-day New York State landscape regions is the most Precambrian bedrock likely to be exposed on the land surface?

Adirondack Mountains and Hudson Highlands

What is the geologic age of most of the bedrock covering the Precambrian rock in present-day New York State?

Paleozoic
The diagram below shows trends in the temperature of North America during the last 200,000 years, as estimated by scientists.

What is the total number of major glacial periods that have occurred in North America in the last 200,000 years?

(1) 5  
(2) 2  
(3) 3  
(4) 4
The diagram below shows the abundance of organisms called crinoids, blastoids, and echinoids throughout different geologic periods. The number of species living at any given time is represented by the width of the blackened areas.

Which statement about crinoids, blastoids, and echinoids is best supported by the diagram?

1. They are now extinct.
2. They came into existence during the same geologic period.
3. They existed during the Devonian Period.
4. They have steadily increased in number since they first appeared.
The cartoon below illustrates possible interaction between humans and mammoths.

The primitive game of “Pull the mammoth’s tail and run”

During which geologic timespan could this “game” have occurred?

(1) Pleistocene Epoch
(2) Pennsylvanian Epoch
(3) Precambrian Era
(4) Paleozoic Era
The diagram below represents bedrock layers found in an outcrop. Three index fossils are found within the bedrock layers.

<table>
<thead>
<tr>
<th>Fossil Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clam</td>
</tr>
<tr>
<td>Eurypterid</td>
</tr>
<tr>
<td>Trilobite</td>
</tr>
</tbody>
</table>

Which evidence best suggests that this outcrop has undergone crustal movement?

1. The same rock layers appear twice within the outcrop.
2. The trilobite fossil is not found in all five layers.
3. The sedimentary layers have the same thickness.
4. The eurypterid fossil is absent in the middle layer.
Geologic cross sections A through F shown below represent different stages in the development of one part of Earth’s crust over a long period of geologic time.

What is the correct order of development from the original (oldest) stage to the most recent (youngest) stage?

(1) $B \rightarrow D \rightarrow C \rightarrow F \rightarrow A \rightarrow E$
(2) $B \rightarrow F \rightarrow C \rightarrow D \rightarrow E \rightarrow A$
(3) $E \rightarrow A \rightarrow D \rightarrow F \rightarrow C \rightarrow B$
(4) $E \rightarrow A \rightarrow F \rightarrow C \rightarrow D \rightarrow B$
The diagram below shows a cross section of New York State bedrock that has not been overturned. Line $X$ represents an unconformity.

The index fossil *Eurypterus* is found in the limestone layer. What trilobite index fossil could be found in the shale layer?

*Elliptocephala* or *Cryptolithus.*