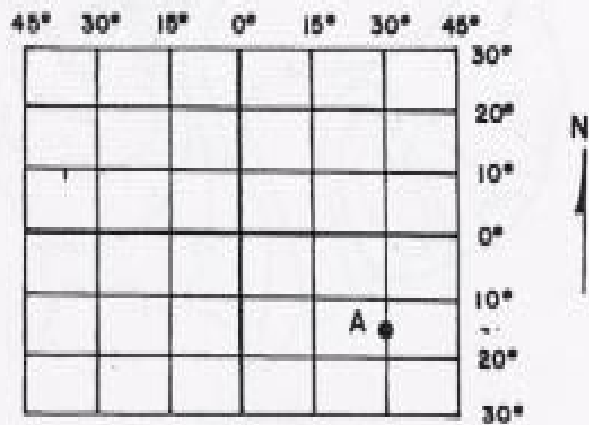


1. The diagram below represents a portion of a map of the Earth's grid system. What is the approximate latitude and longitude of point A?



- (1) 15°N, 30°W. (3) 15°N, 30°E.
 (2) 15°S, 30°W. (4) 15°S, 30°E.
2. Base your answer to the following question on the *Earth Science Reference Tables*.

What is the location of Binghamton, New York?

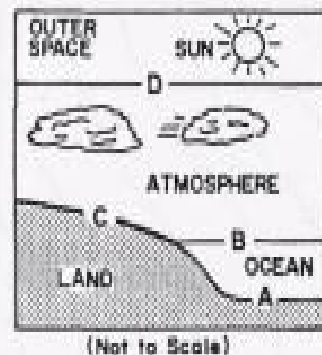
- (1) 42° 06' N. lat., 75° 55' W. long.
 (2) 42° 06' N. lat., 76° 05' W. long.
 (3) 42° 54' N. lat., 76° 05' W. long.
 (4) 42° 54' N. lat., 75° 55' W. long.
3. According to the data below, what is the exact shape of the Earth?

Actual Dimensions of the Earth

Equatorial Radius	6,378 km
Polar Radius	6,357 km
Equatorial Circumference	40,076 km
Polar Circumference	40,008 km

- (1) slightly flattened at both the Equator and the Poles
 (2) slightly bulging at both the Equator and the Poles
 (3) slightly flattened at the Equator and slightly bulging at the Poles
 (4) slightly flattened at the Poles and slightly bulging at the Equator

4. Which line best identifies the interface between the lithosphere and the troposphere?



- (1) line A (3) line C
 (2) line B (4) line D
5. Based on the Generalized Bedrock Geology Map of New York State in the *Earth Science Reference Tables*, what could be the approximate location of an observer if he measured the altitude of Polaris to be 41 degrees above the horizon?
- (1) Watertown (3) Buffalo
 (2) Massena (4) New York City
6. The diagrams below represent four systems of imaginary lines that could be used to locate positions on a planet. Which system is most similar to the latitude-longitude system used on the Earth?

(1) NORTH POLE



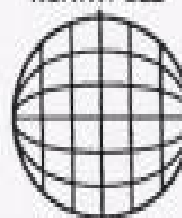
SOUTH POLE

(3) NORTH POLE



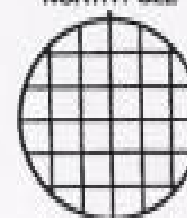
SOUTH POLE

(2) NORTH POLE



SOUTH POLE

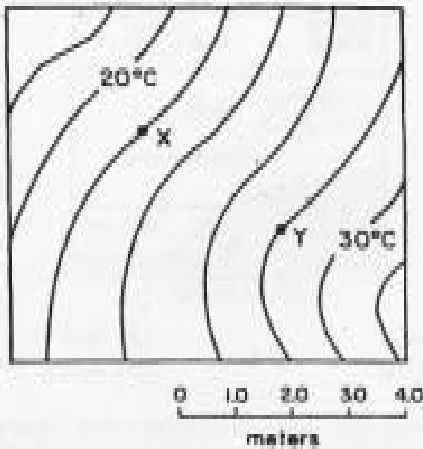
(4) NORTH POLE



SOUTH POLE

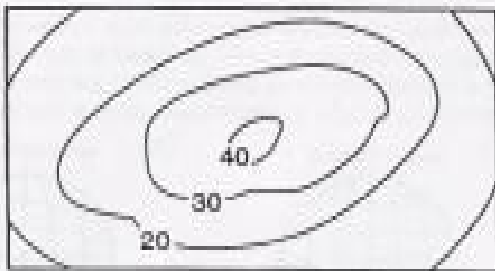
PRE TEST

7. The diagram below represents a temperature field in degrees Celsius. What is the approximate temperature field gradient between points X and Y? [Refer to the *Earth Science Reference Tables*.]



- (1) 0.5 °C/m (3) 3 °C/m
 (2) 2 °C/m (4) 6 °C/m

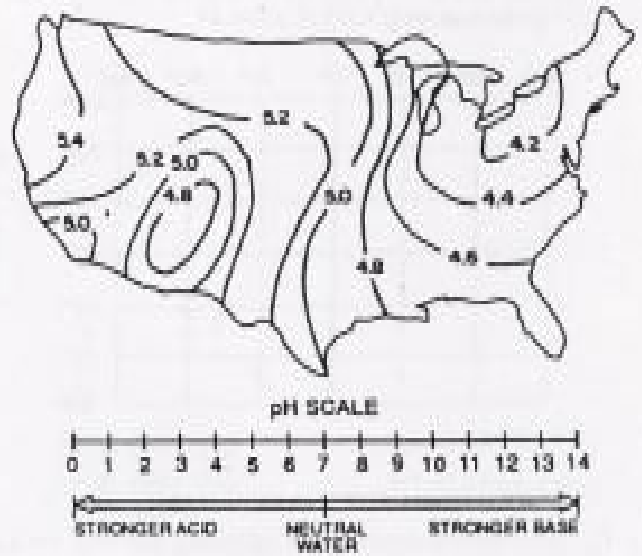
8. Isolines on the map below show elevations above sea level, measured in meters.



What is the highest possible elevation represented on this map?

- (1) 38 m (3) 49 m
 (2) 41 m (4) 51 m

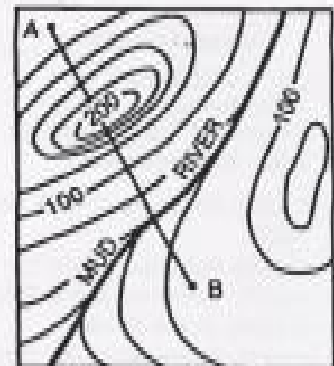
9. The map below illustrates the distribution of acid rain over the United States on a particular day. The isolines represent acidity measured in pH units.



According to the pH scale shown below the map, which region of the United States has the greatest acid rain problem?

- (1) northeast (3) southeast
 (2) northwest (4) southwest

10. The isoline diagram below represents an elevation field.



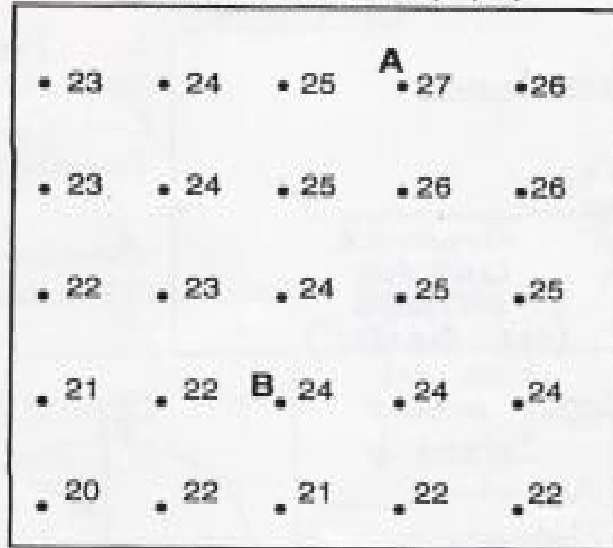
Which profile best represents the topography along line AB?

- (1) (3)
- (2) (4)

PRE TEST

14. Base your answer to the following question on the temperature field map below. The map shows 25 measurements (in °C) that were made in a temperature field and recorded as shown. The dots represent the exact location of the measurements. **A** and **B** are locations within the field.

Temperature Field Map (°C)



A) On the temperature field map above, draw three isotherms: the 23 °C isotherm, the 24 °C isotherm, and the 25 °C isotherm.

B) CALCULATE THE GRADIENT Between A + B

Cottonwood, Colorado

