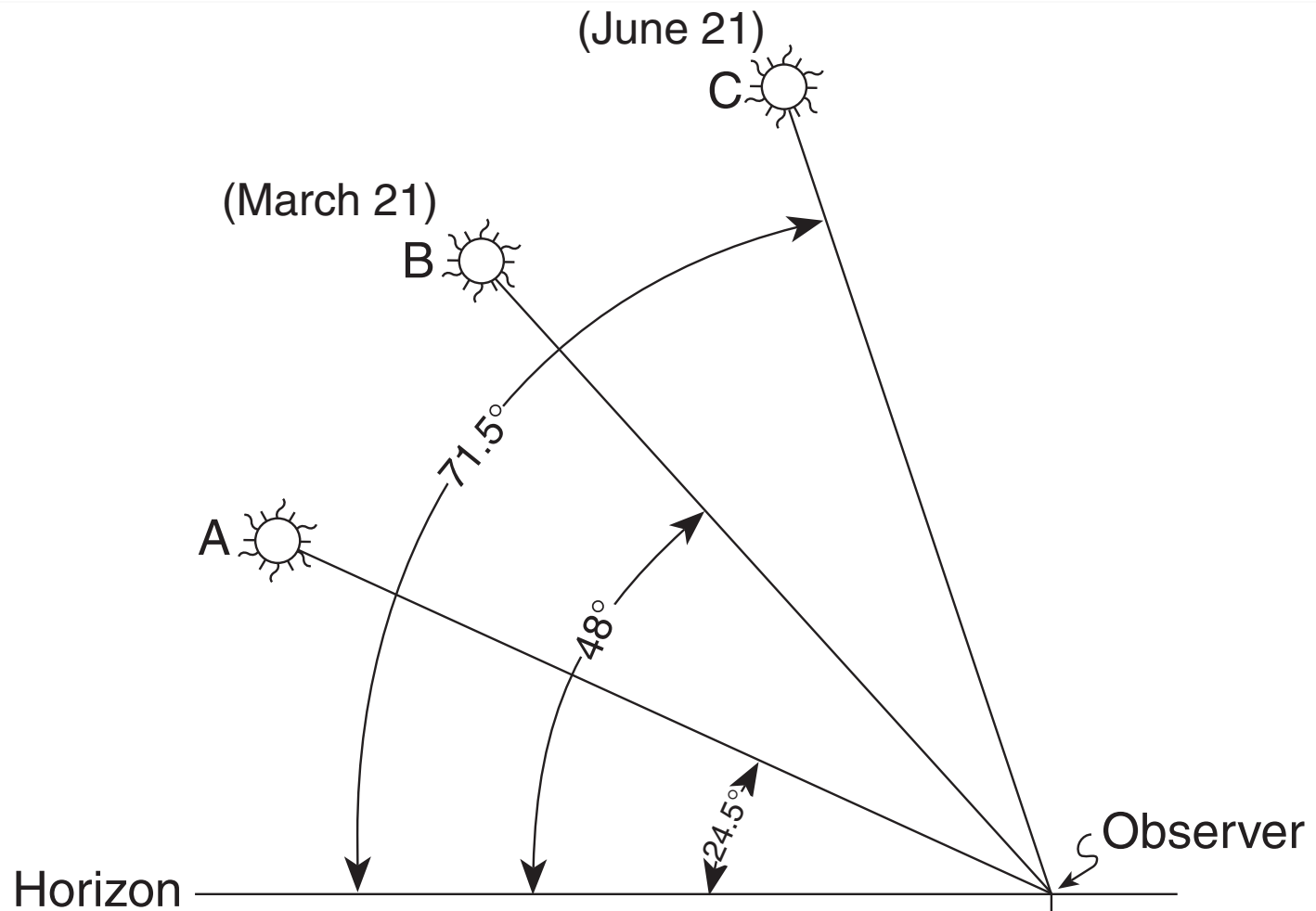


Regents Review

Answer all the questions on a piece of looseleaf.

BEGIN



How many degrees does the altitude of the noon sun change from 12/21 to 3/21 in NY? Explain why.

BACK

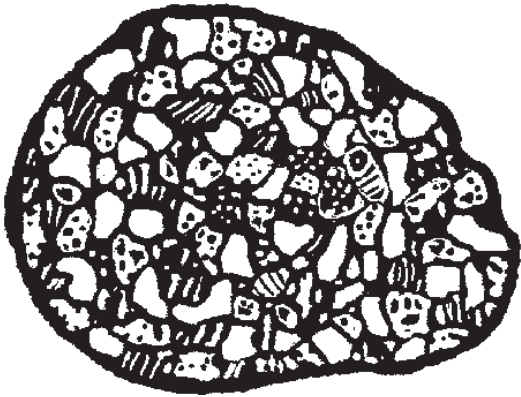
#1

NEXT

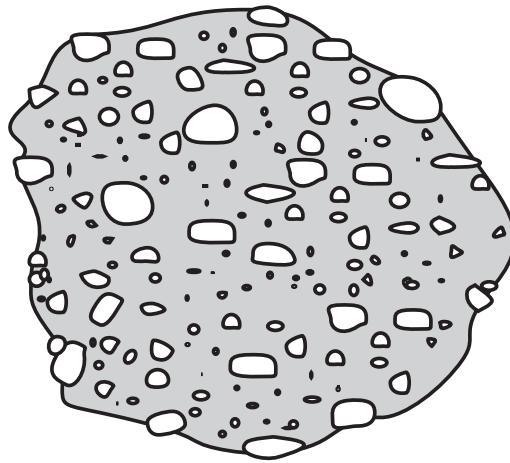
ANSWER:

23.5°

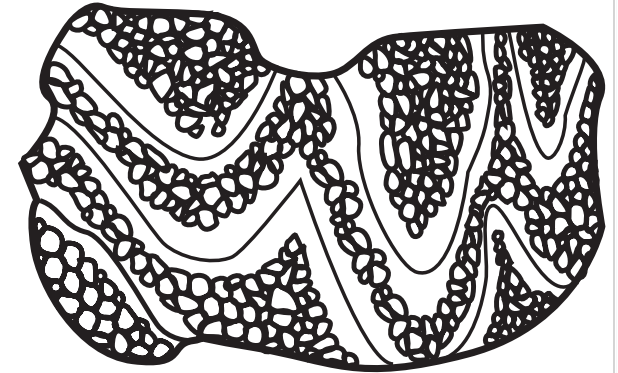
As the Earth revolves around the Sun, the altitude gets higher as you go from winter to spring.



Igneous



Sedimentary



Metamorphic

What is the main difference between igneous, sedimentary, and metamorphic rocks?

BACK

#2

NEXT

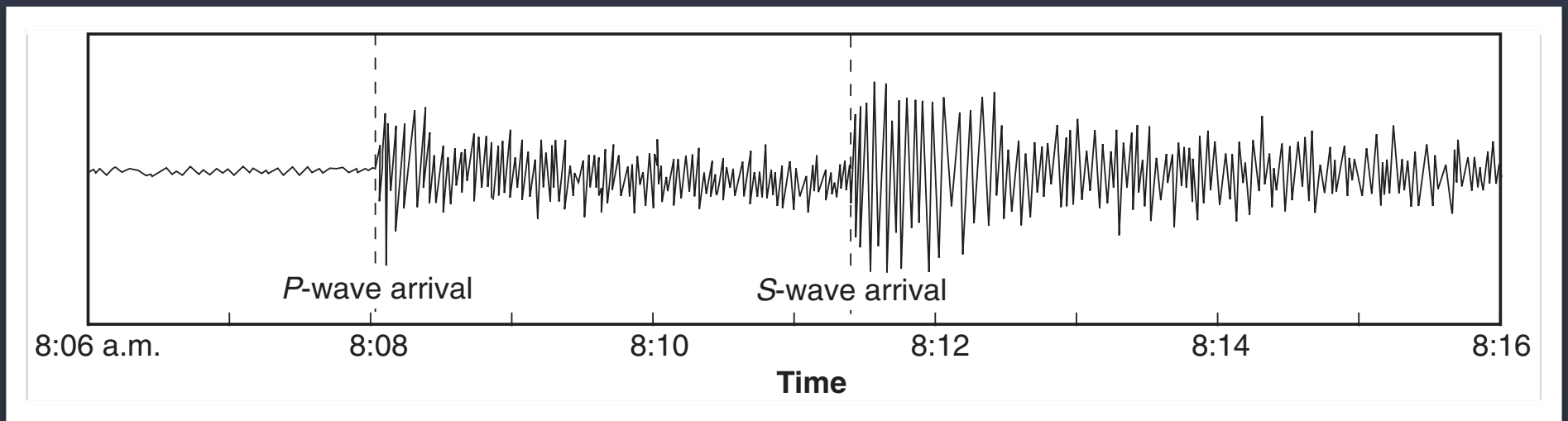
ANSWER:

How each of the rocks form

BACK

#3

NEXT



How far is this location from the epicenter of this earthquake? (hint: lag and wedgie)

BACK

#3

NEXT

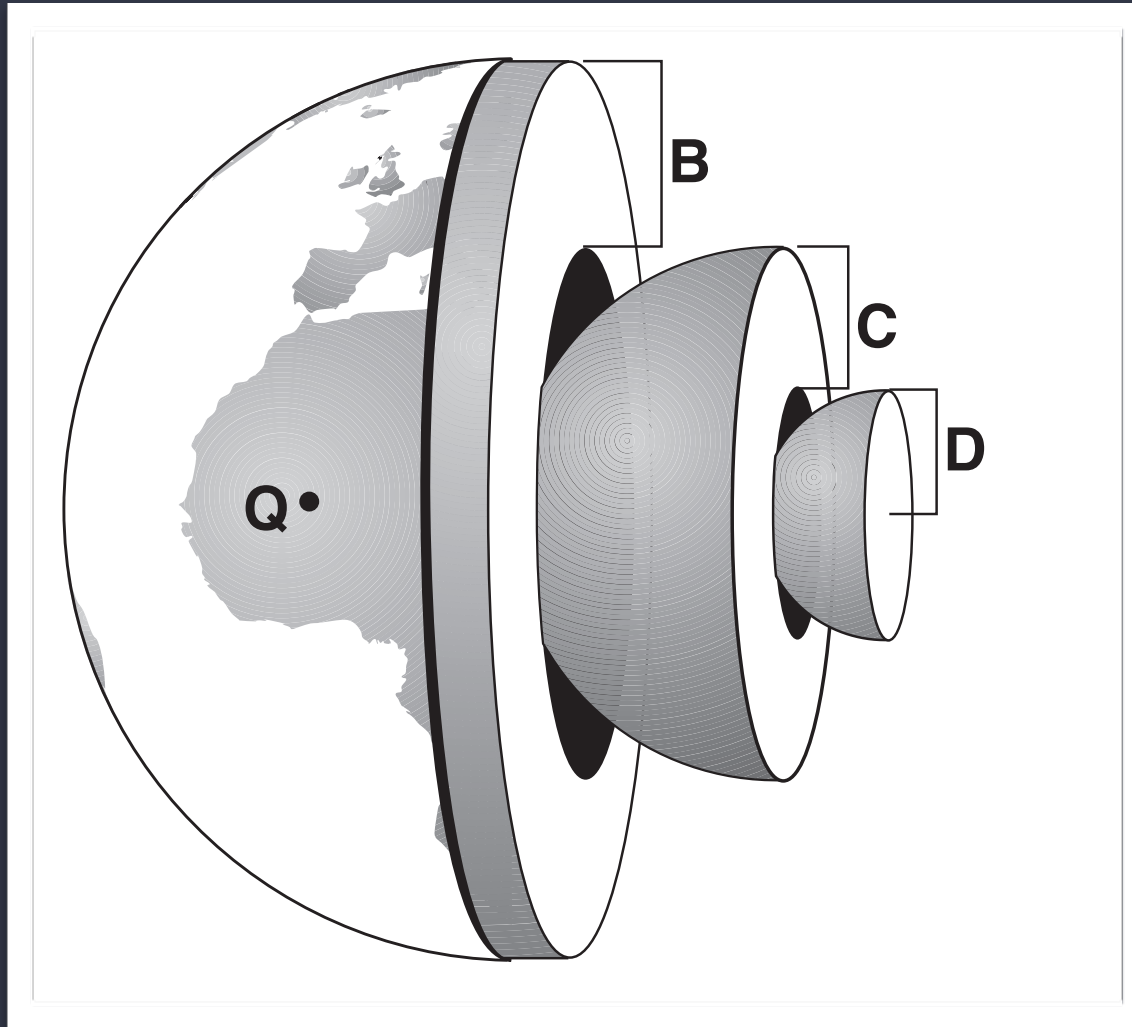
ANSWER:

S Wave Arrival: 08:11:30

-P Wave Arrival: 08:08:00

Lag Time: 00:03:30

Wedgie the lag time and distance: 2200km



Which of these layers is thought to be entirely liquid?
(Give the letter and the name)

BACK

#4

NEXT

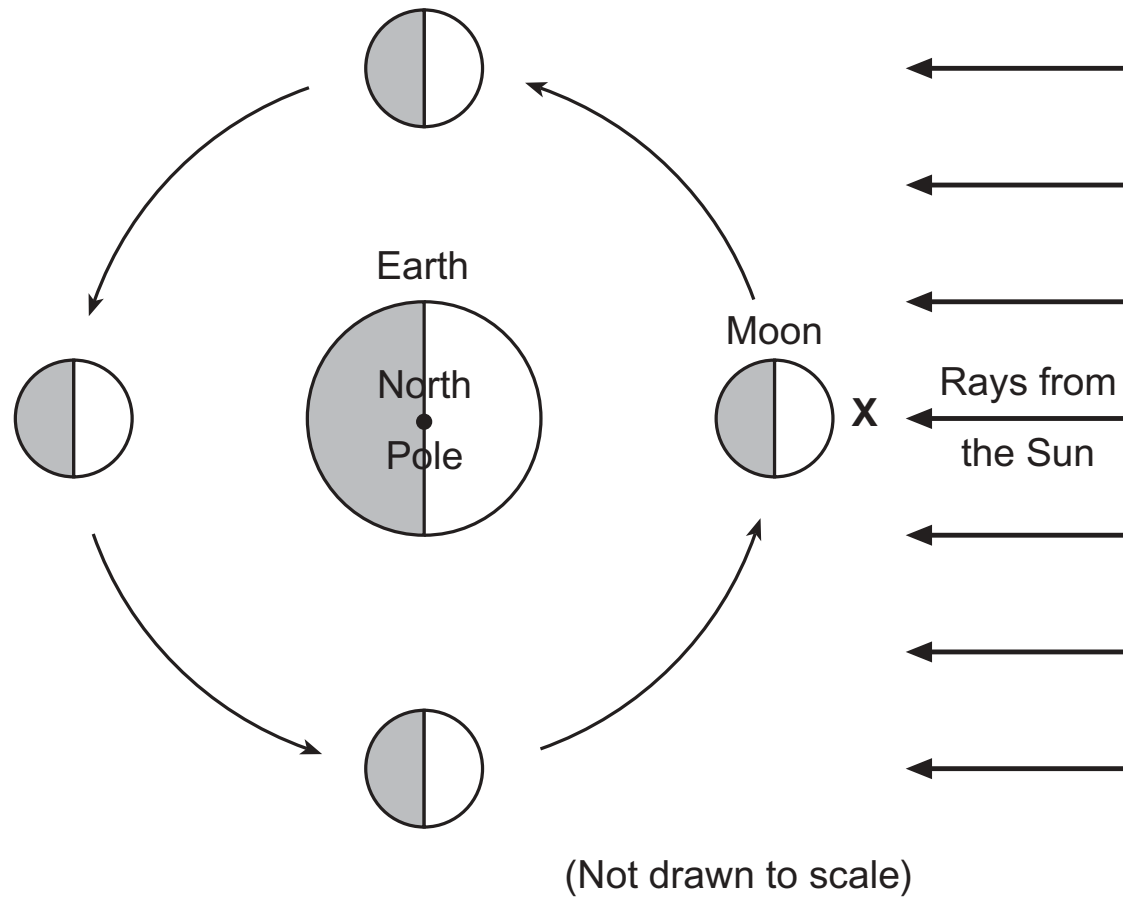
ANSWER:

C: Liquid Outer Core

BACK

#5

NEXT



What phase would be visible from Earth when the Moon is at X?
What type of eclipse could occur?

BACK

#5

NEXT

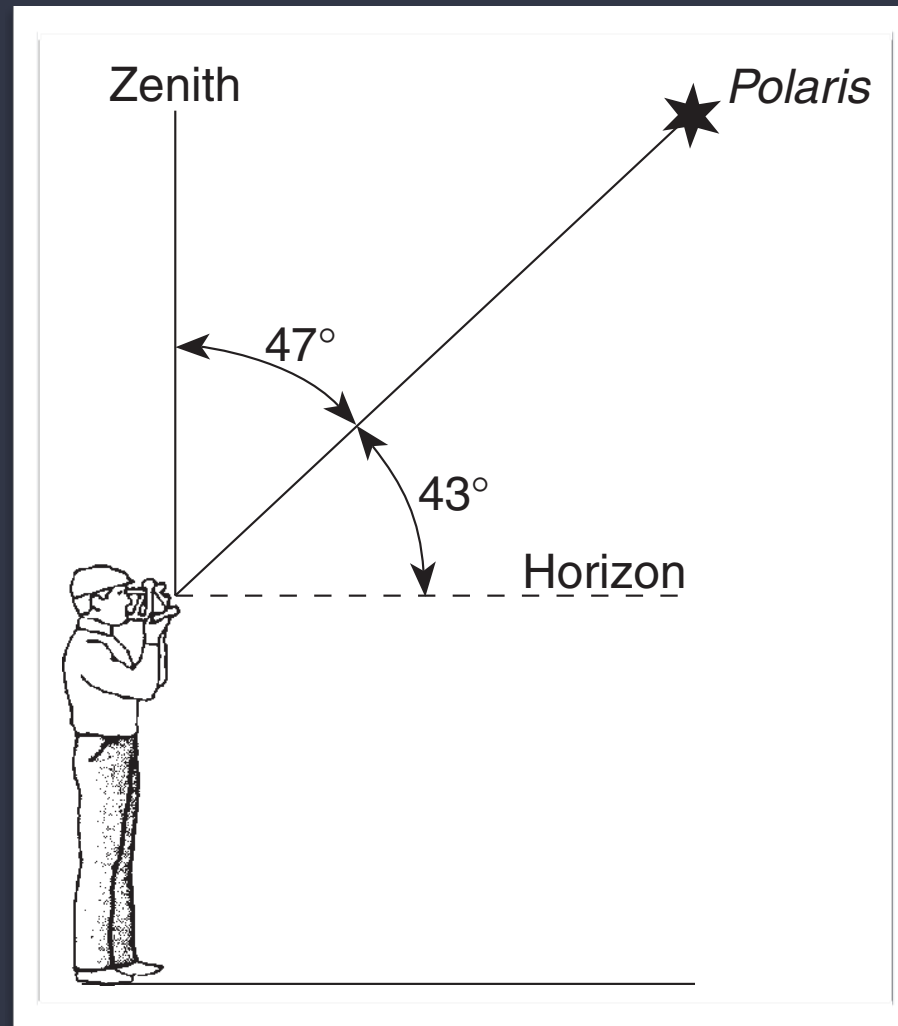
ANSWER:

New Moon and a Solar Eclipse

BACK

#6

NEXT



What is the current latitude of this man's location?
What is one possible city he is close to?

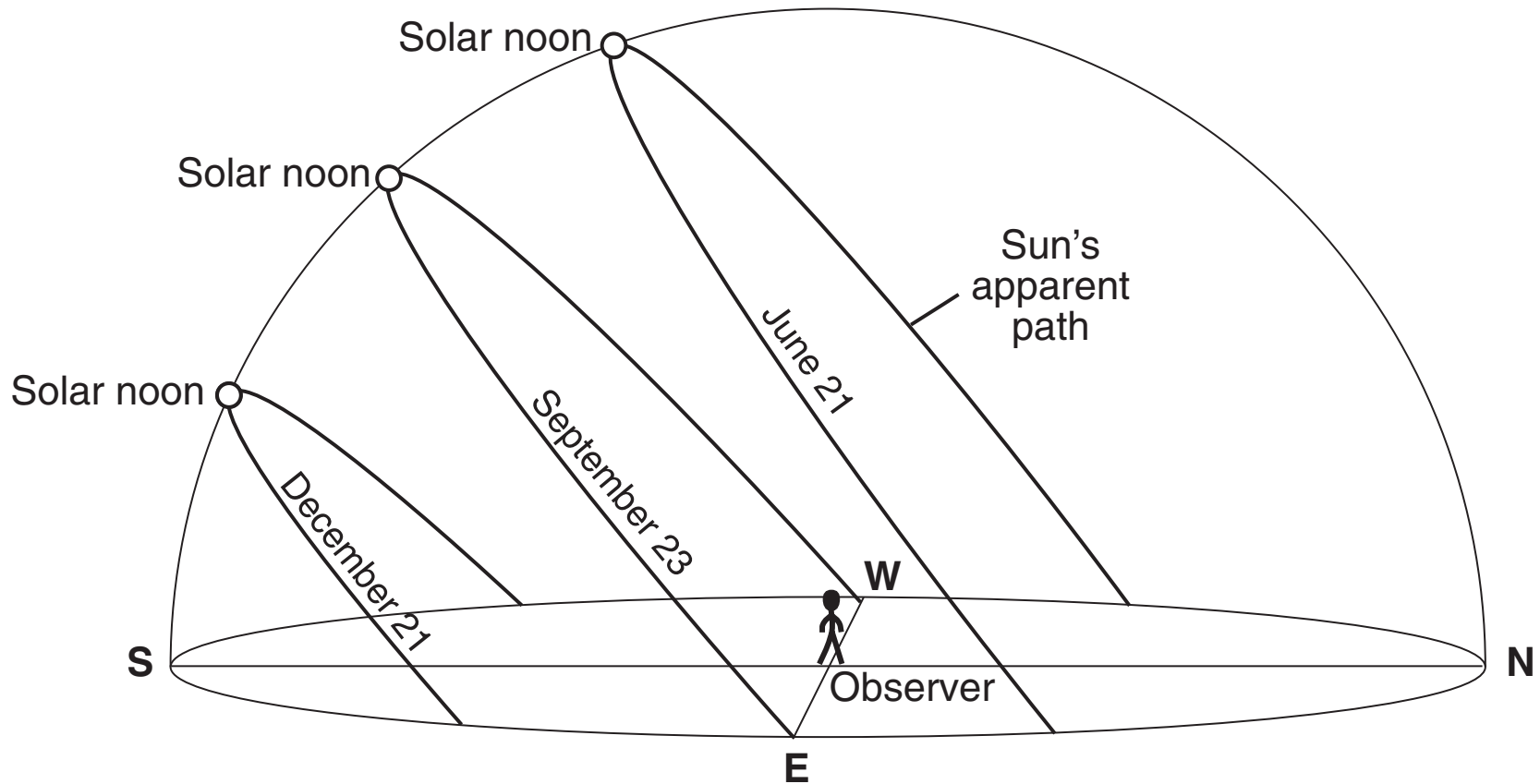
BACK

#6

NEXT

ANSWER:

43° North and a city could be Utica, Syracuse,
Rochester or Niagara Falls



How much higher is the noon sun on June 21st than on December 21st?

BACK

#7

NEXT

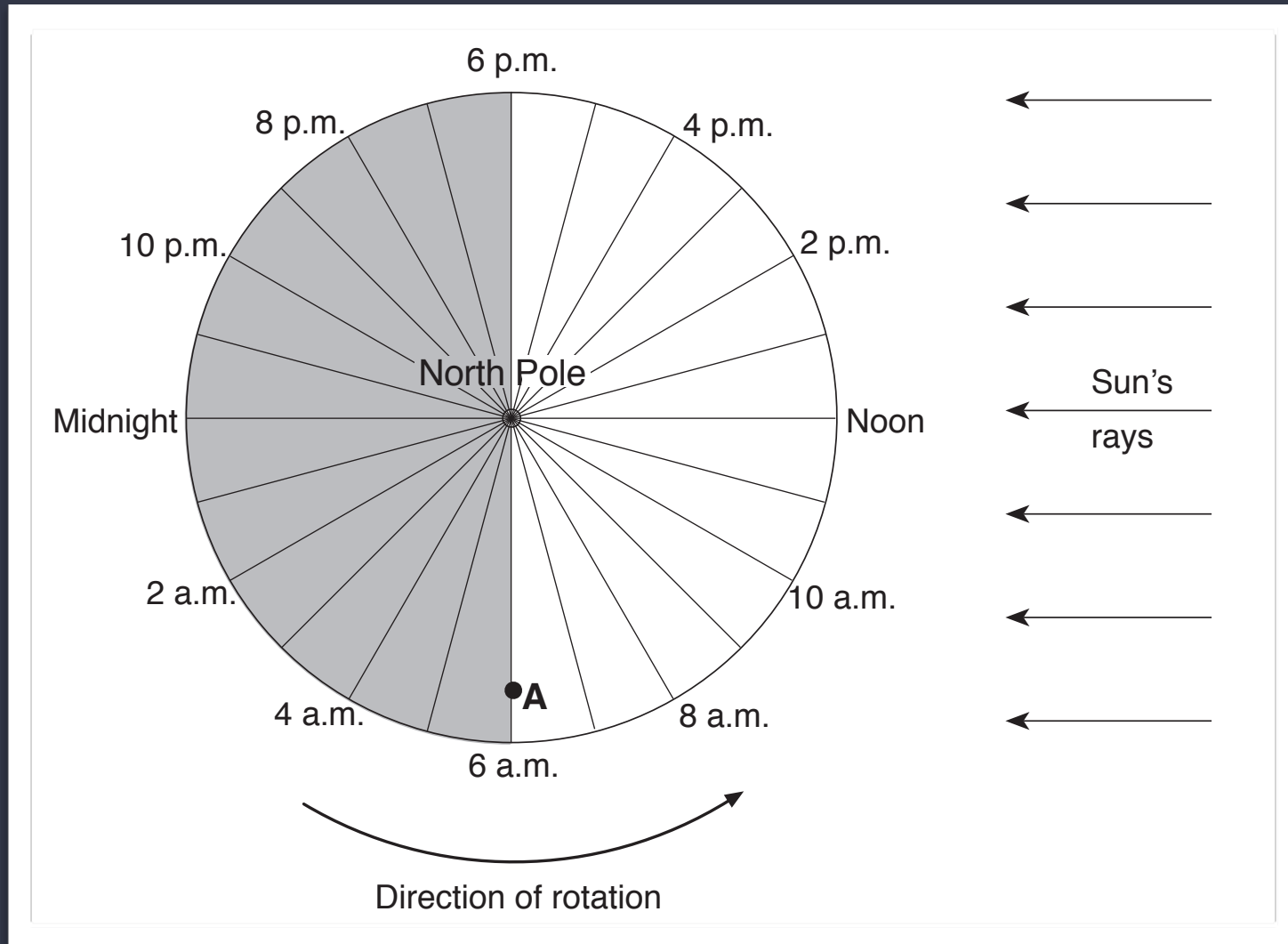
ANSWER:

47° higher

BACK

#8

NEXT



How many degrees will point A rotate as it moves from its current position at 6am to where it will be at 12 noon?

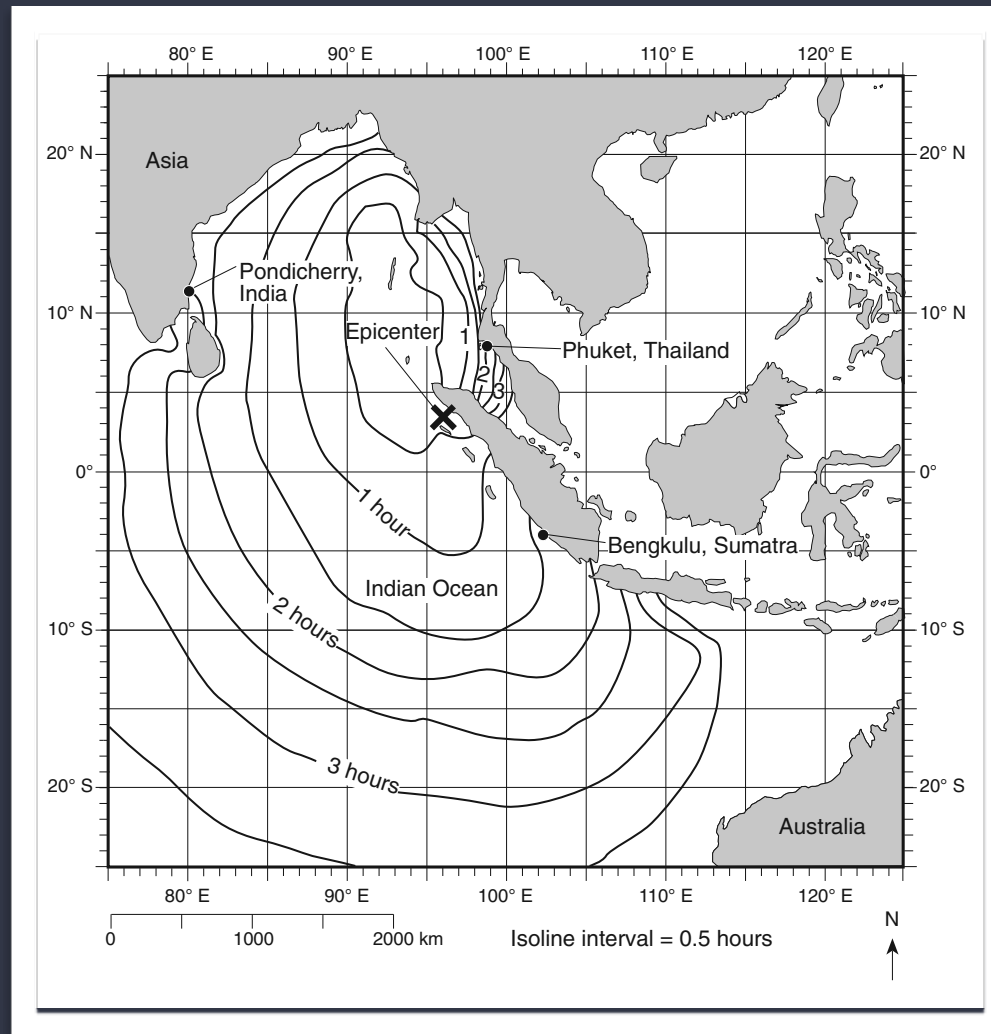
BACK

#8

NEXT

ANSWER:

90°



What was the cause of the tsunami shown on this map?
What should you do in the event of a tsunami warning in your area?

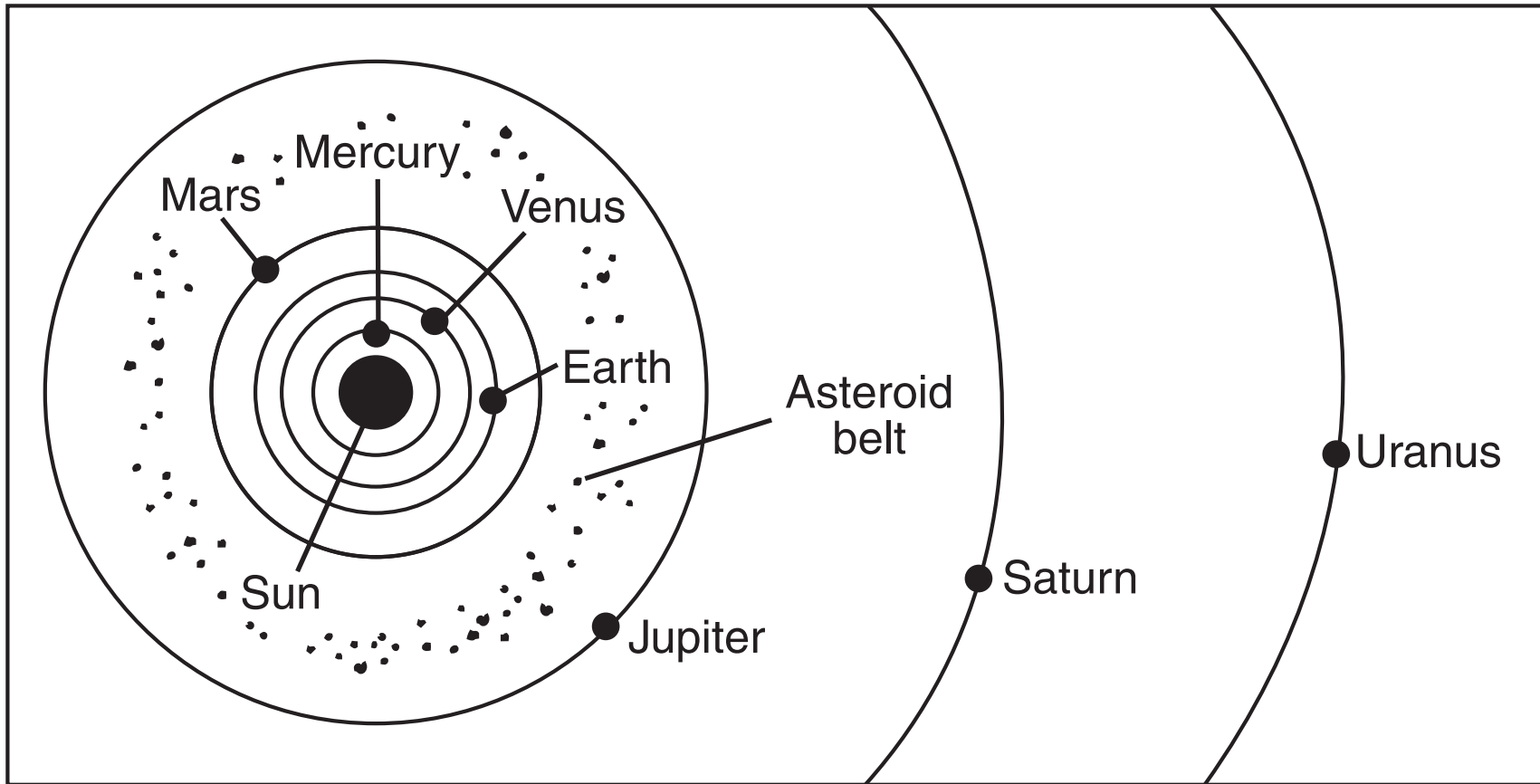
BACK

#9

NEXT

ANSWER:

Earthquake and you should head to higher ground



(Not drawn to scale)

What type of model of the solar system is represented here?
Approximately how far from the Sun is the Asteroid belt?

BACK

#10

NEXT

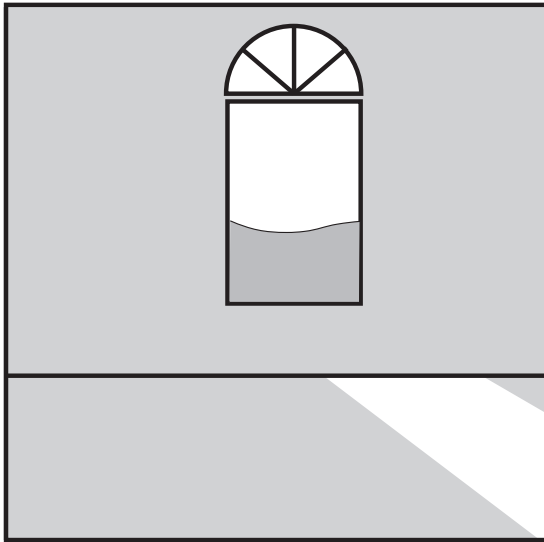
ANSWER:

Heliocentric Model and between 227.9-778.4 million km

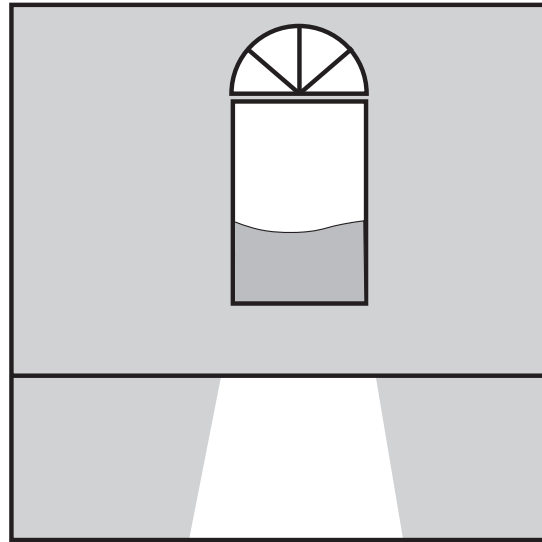
BACK

#11

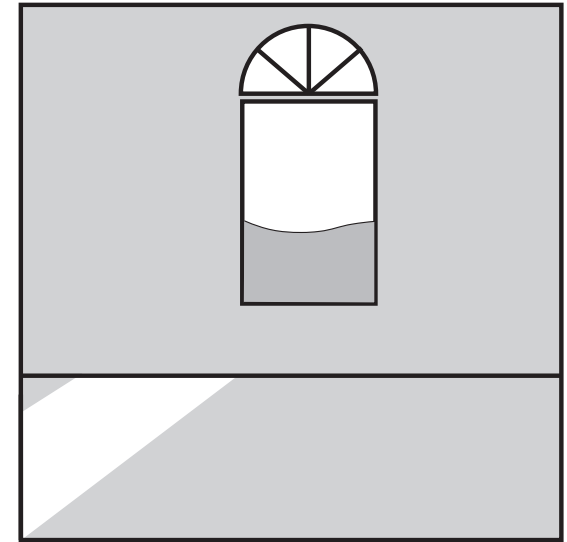
NEXT



Sunrise



Noon



Sunset

If this house is located in NY, what compass direction is this window facing?

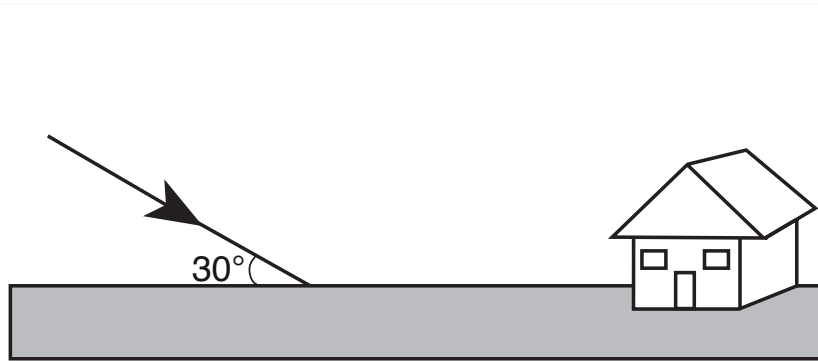
BACK

#11

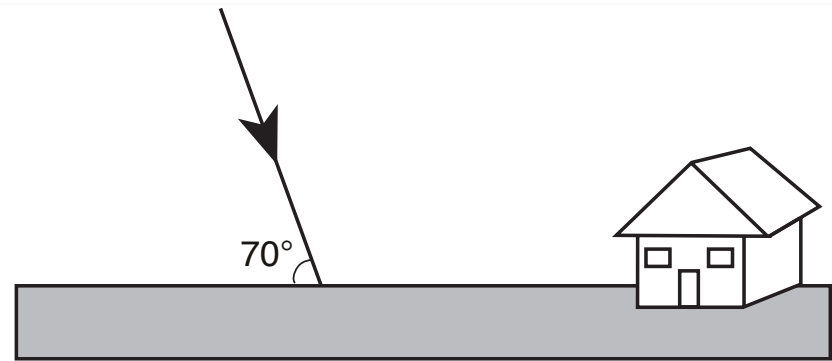
NEXT

ANSWER:

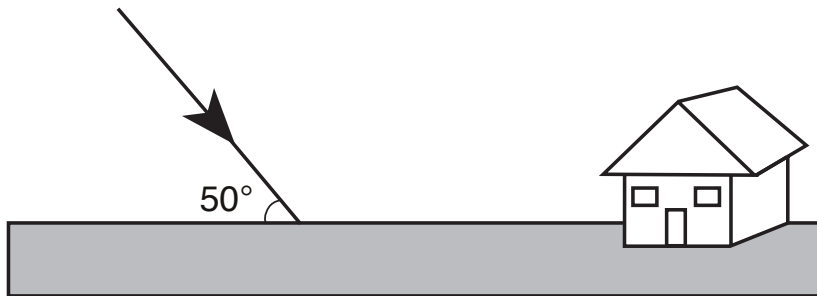
South



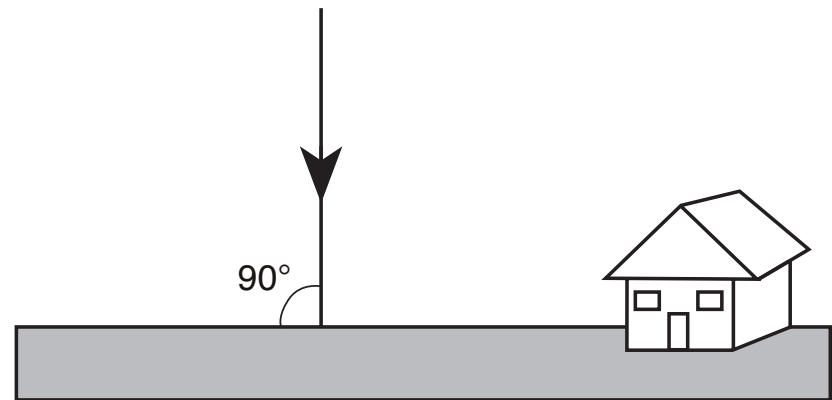
(1)



(3)



(2)



(4)

Which location is currently experiencing the most direct insolation?

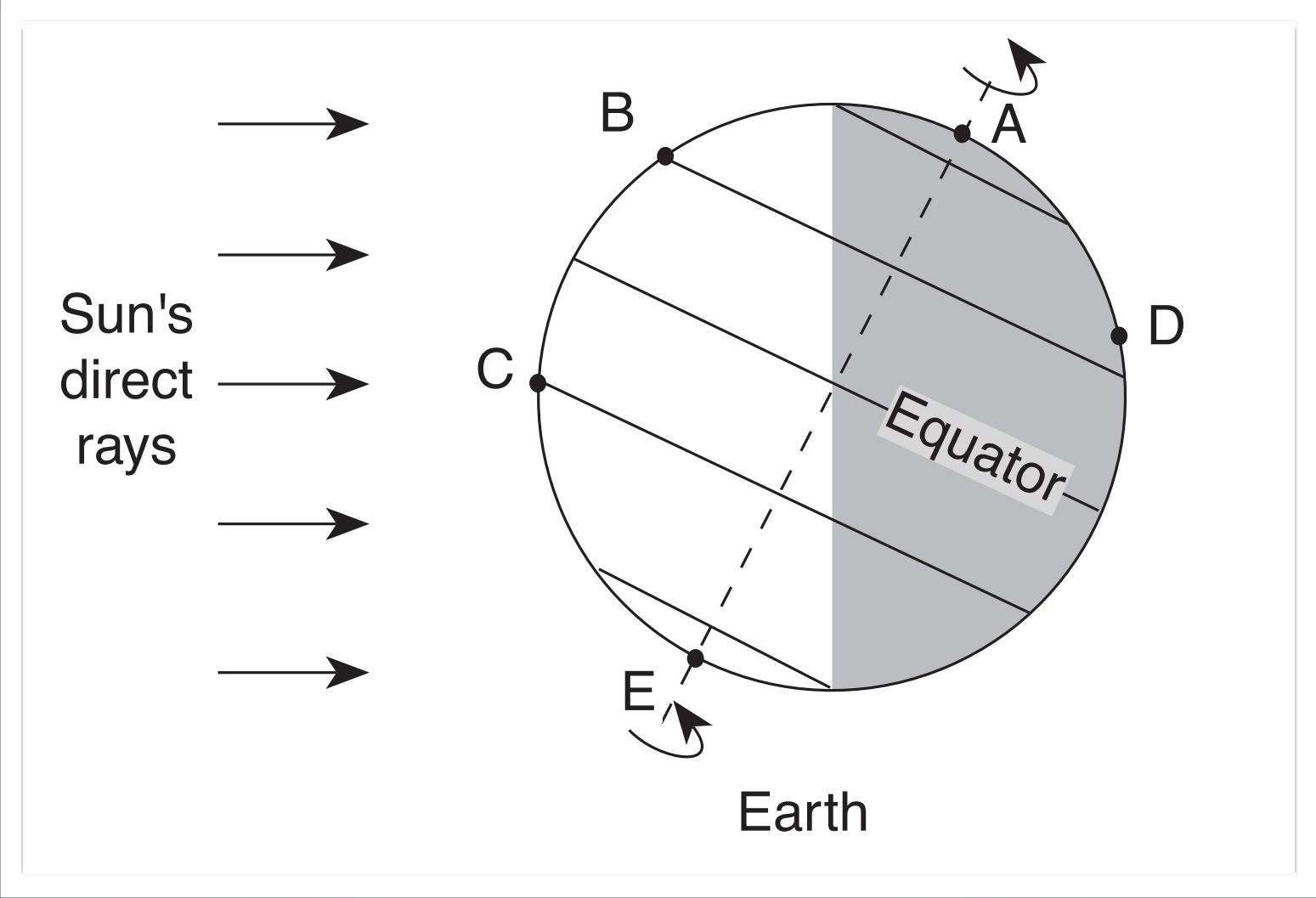
BACK

#12

NEXT

ANSWER:

Choice 4



What date is represented by this diagram?
How many hours of daylight will NY experience on this day?

BACK

#13

NEXT

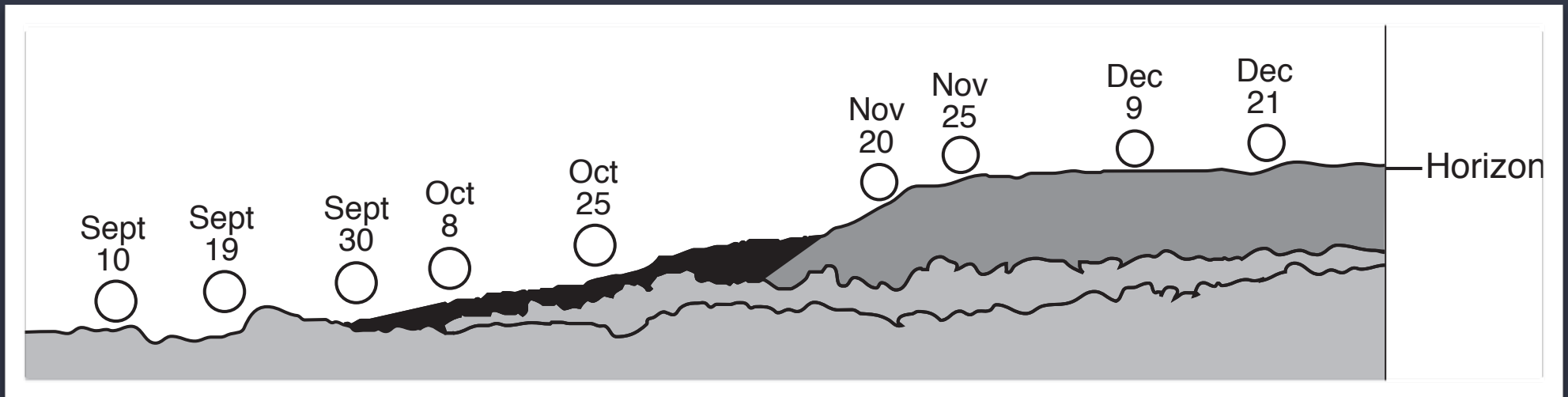
ANSWER:

Winter and 9 hours of daylight

BACK

#14

NEXT



If these circles represent sunrise on different dates, what compass direction is the December 21 sun?

BACK

#14

NEXT

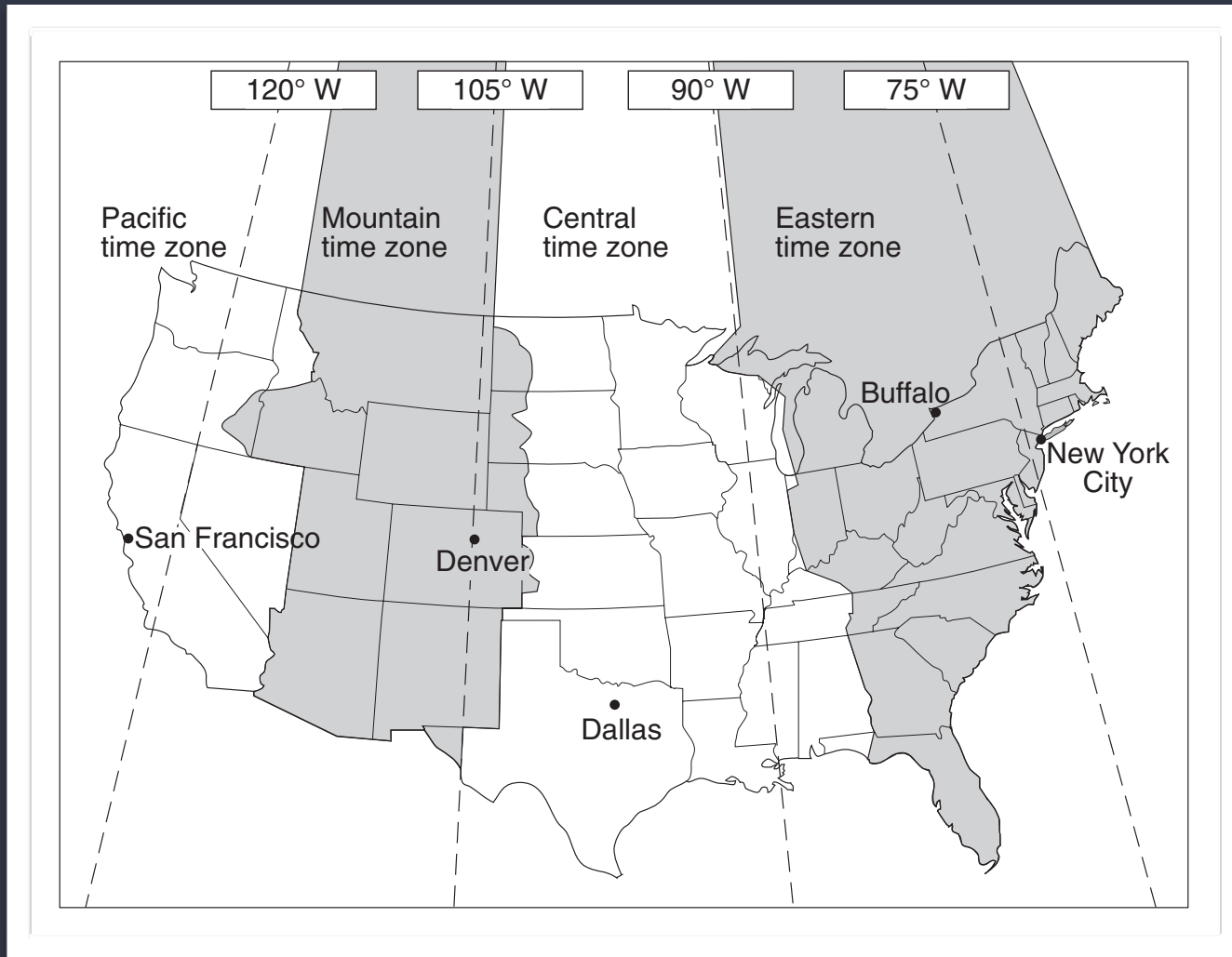
ANSWER:

Southeast

BACK

#15

NEXT



If it is 10am in New York City, what time is it in Denver?

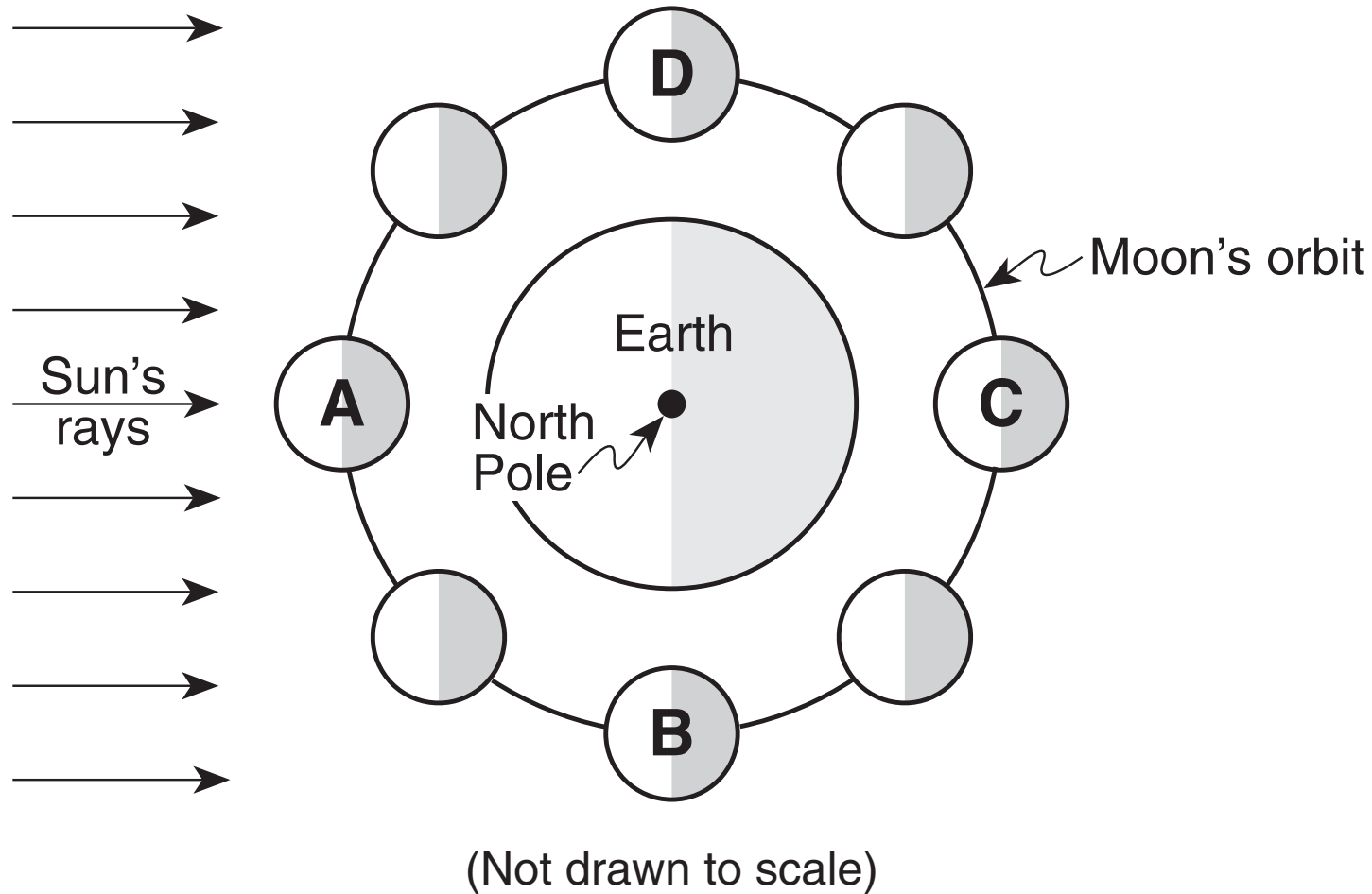
BACK

#15

NEXT

ANSWER:

8am (as you go west, the time gets less)



In which position of the Moon could a solar eclipse occur?
Draw the phase as seen from Earth when the Moon is in position D.

BACK

#16

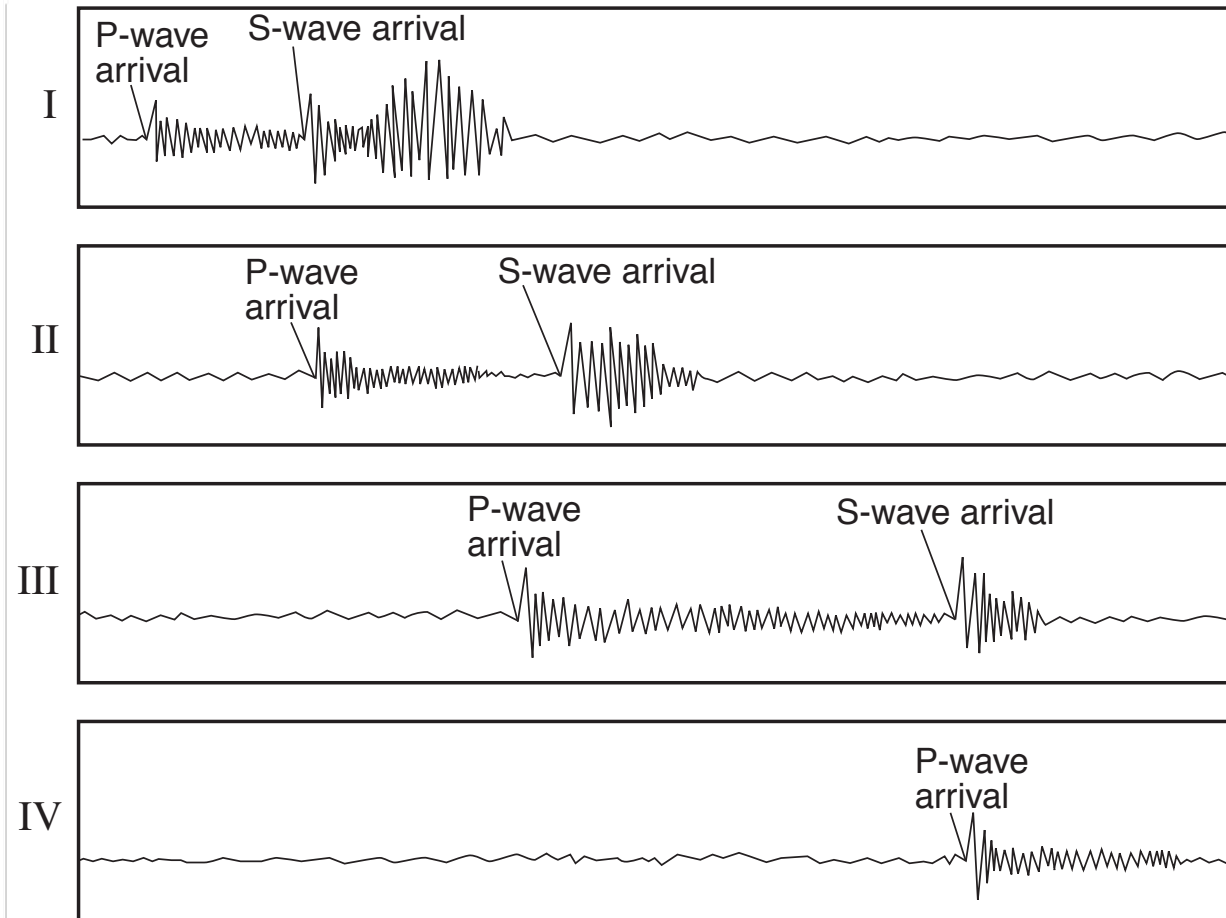
NEXT

ANSWER:

Solar Eclipse at A

Moon position D:





Which location (I, II, III or IV) is located closest to the epicenter of this earthquake?

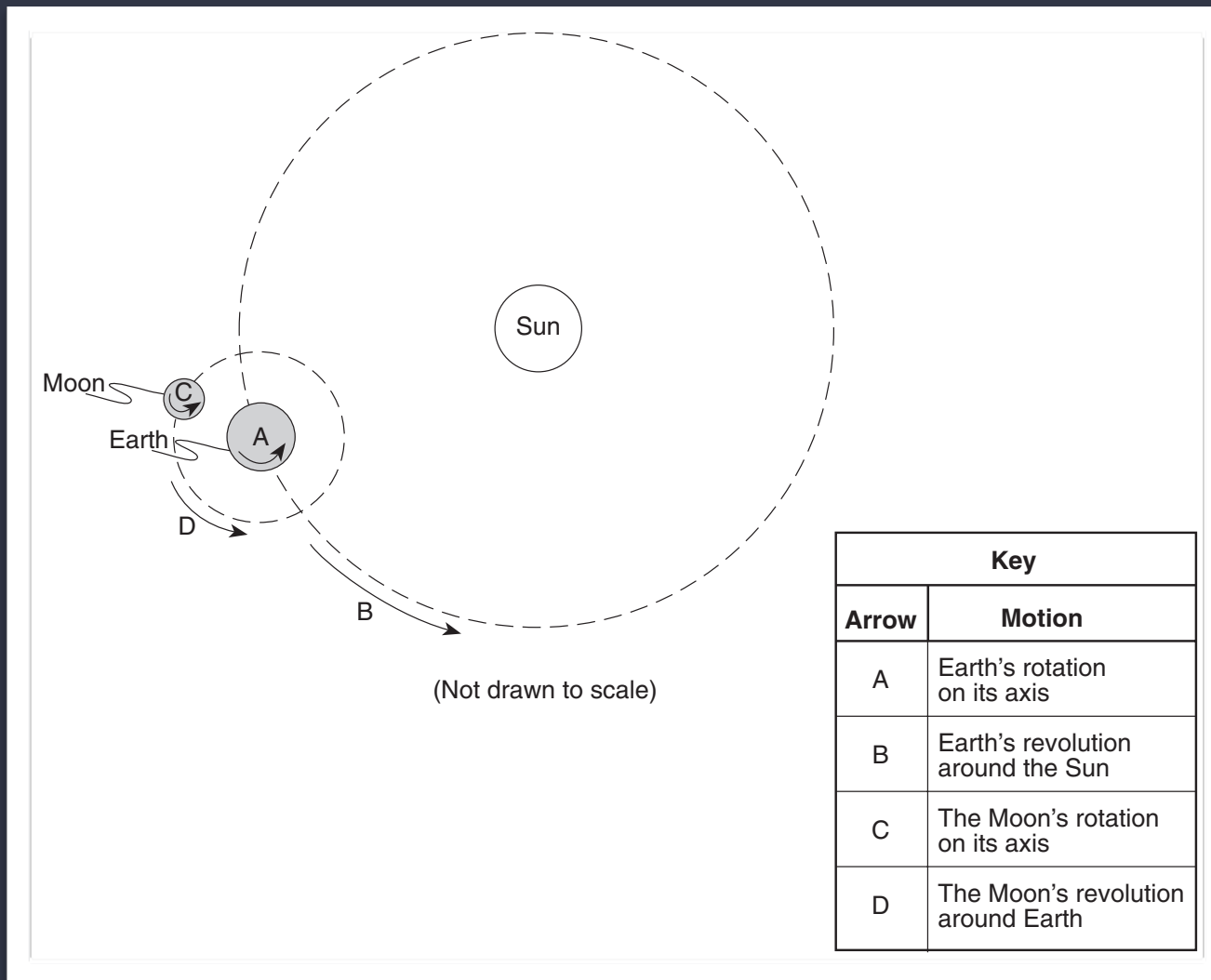
BACK

#17

NEXT

ANSWER:

Location 1



Which motion (A, B, C, or D) is responsible for lunar phases?
Which motion is responsible for the apparent path of the Sun each day?

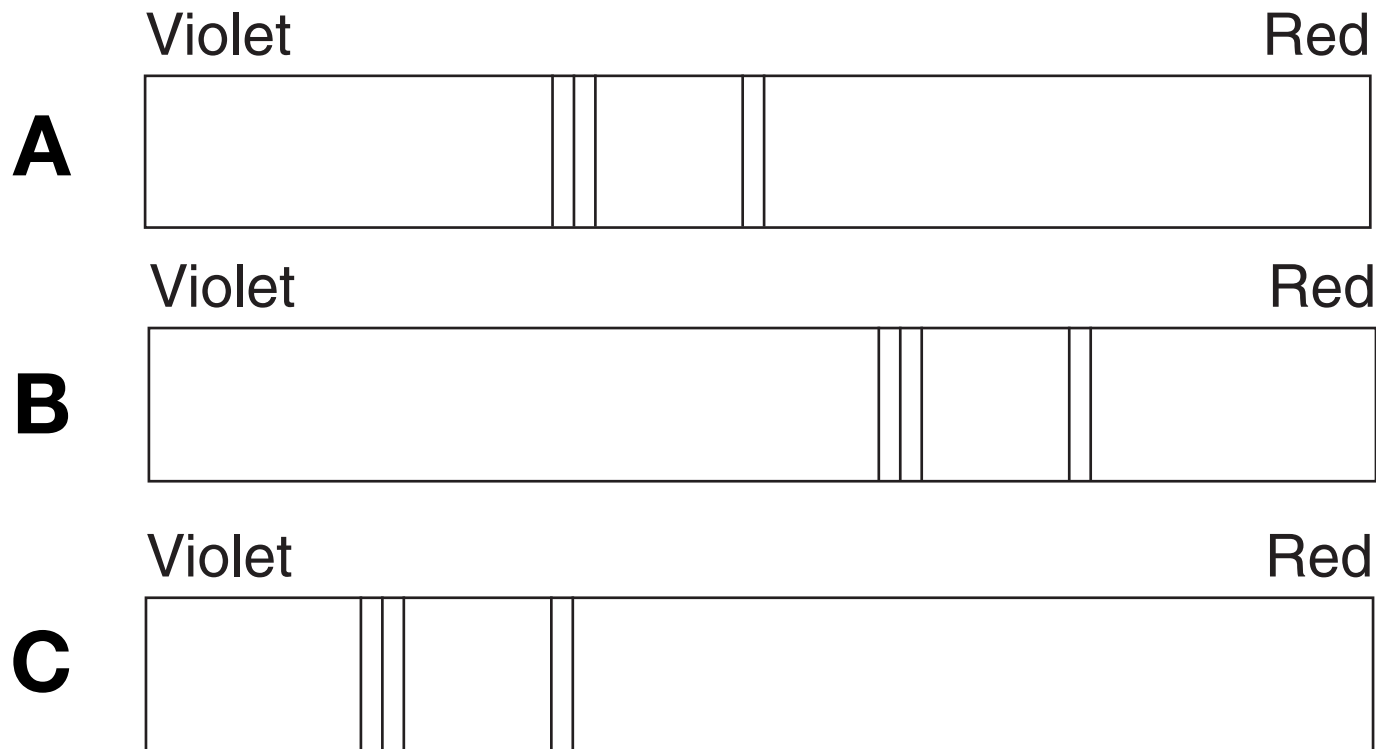
BACK

#18

NEXT

ANSWER:

Motion D: Moons Revolution
Motion A: Earth's Rotation



If spectrum A is a laboratory spectrum, which galaxy (B or C) is moving away from the observer?

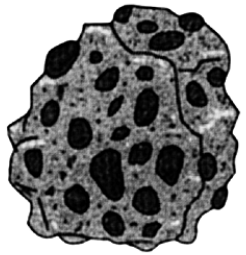
BACK

#19

NEXT

ANSWER:

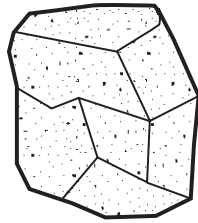
Spectrum B



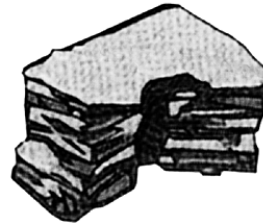
A
Conglomerate



B
Breccia



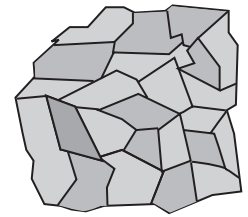
C
Sandstone



D
Shale



E
Limestone



F
Rock salt

Which of these rocks is clastic, and composed of the smallest sediments?

BACK

#20

NEXT

ANSWER:

Shale

BACK

#21

NEXT



What is a galaxy?
How are galaxies classified?
What type of galaxy is shown in this picture?

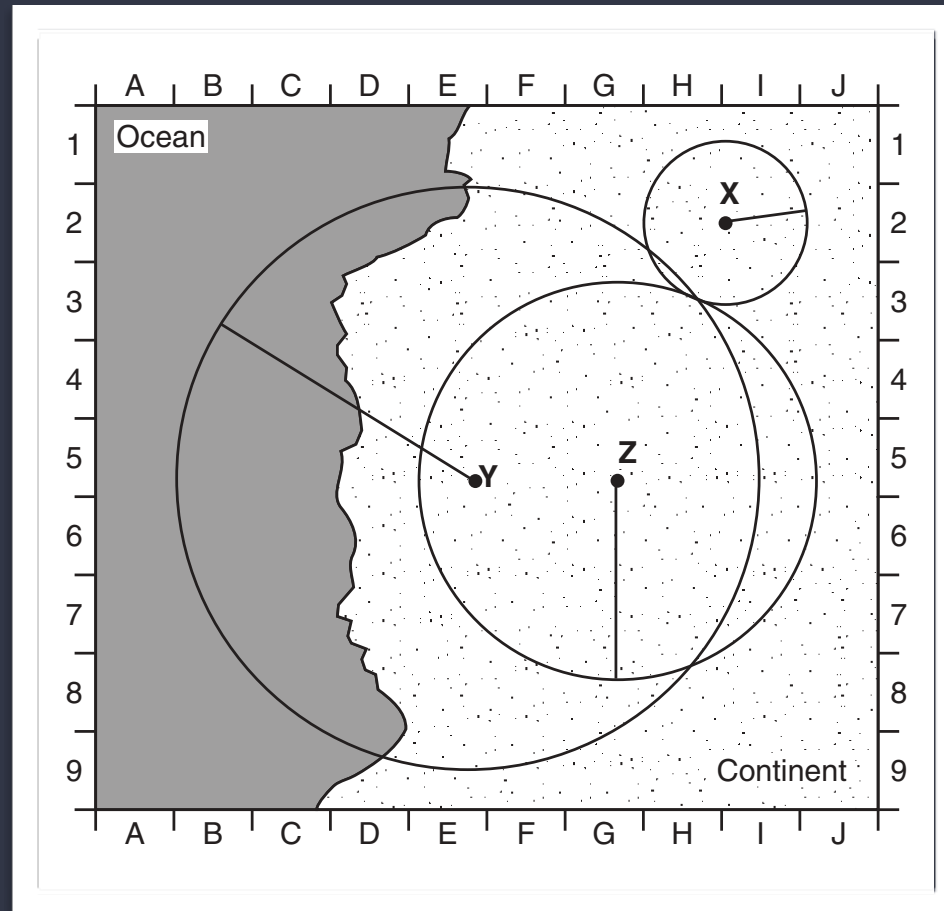
ANSWER:

Galaxies are massive groups of stars
The are classified by shape
This is the Milky Way (Spiral Galaxy)

BACK

#22

NEXT



Use the letters and numbers around the edges of this map to describe the location of the epicenter of this earthquake.
(for example, the “n” in the word “ocean” is located at B-1)

BACK

#22

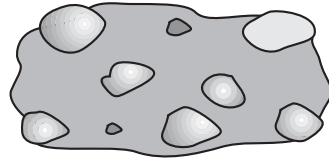
NEXT

ANSWER:

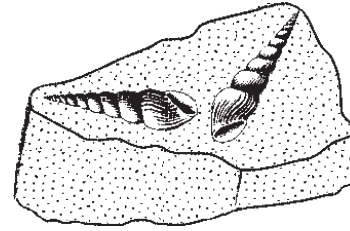
H3



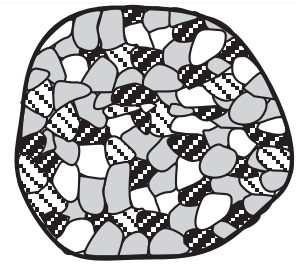
Sample A



Sample B



Sample C



Sample D

Classify these samples as igneous sedimentary or metamorphic.
Explain what characteristic helped you identify the rock.

BACK

#23

NEXT

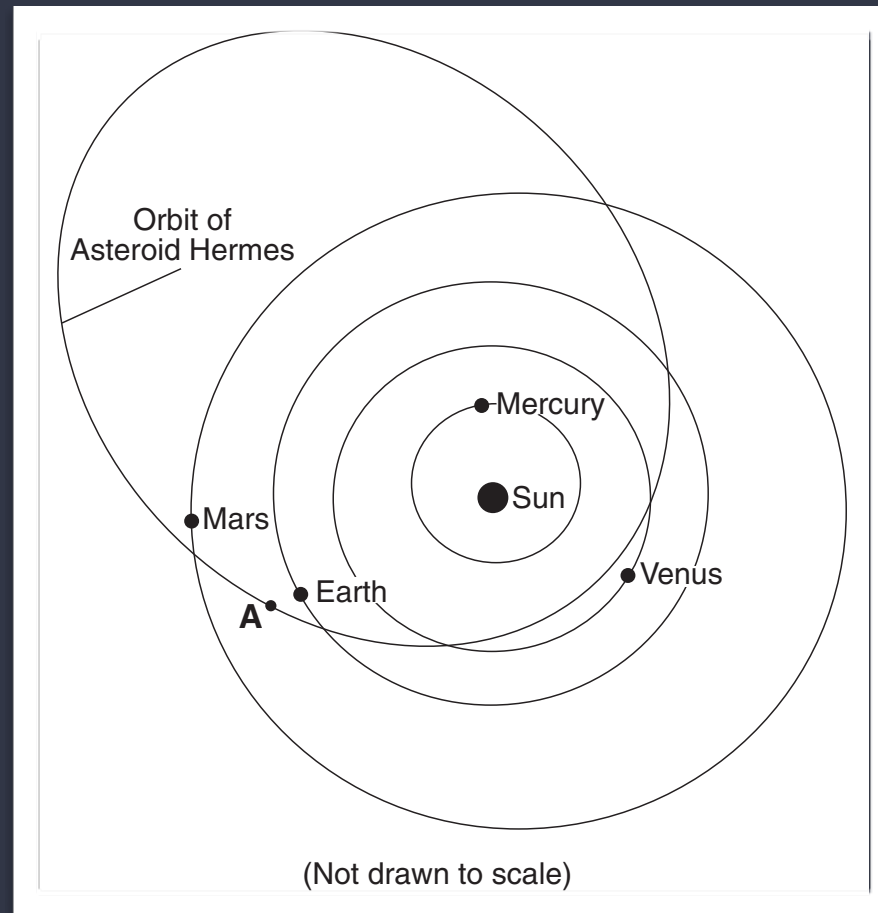
ANSWER:

Sample A-Metamorphic: Banding

Sample B-Sedimentary-Cemented Pebbles

Sample C-Sedimentary-Fossils

Sample D-Igneous-Interlocking Crystals



In terms of eccentricity, how does the orbit of Hermes compare with that of the other planets shown?

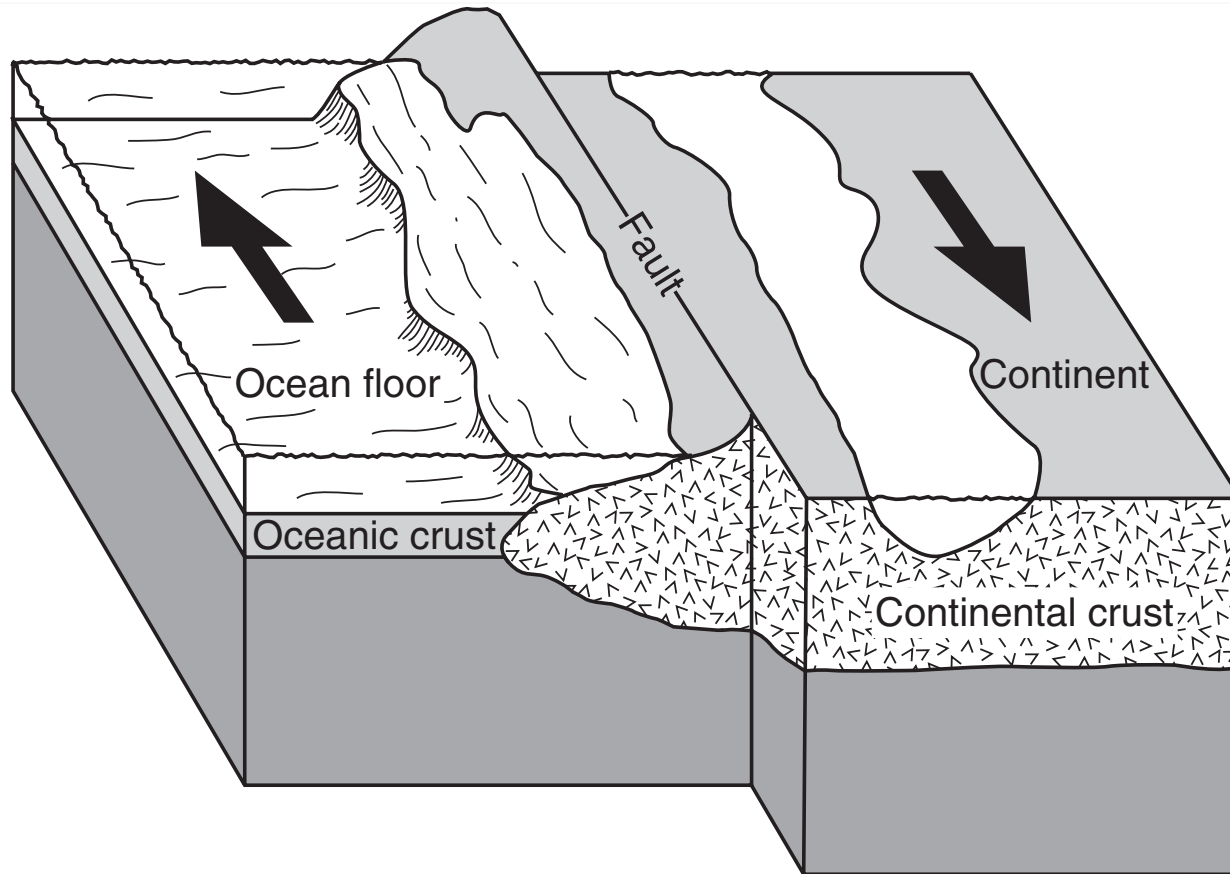
BACK

#24

NEXT

ANSWER:

Hermes is flatter, more elliptical, higher eccentricity



(Not drawn to scale)

What type of plate boundary is shown here?

Name one location on Earth where this type of plate motion is occurring?

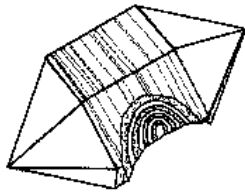
BACK

#25

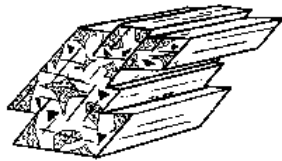
NEXT

ANSWER:

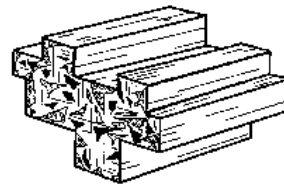
Transform Plate Boundary-San Andreas Fault



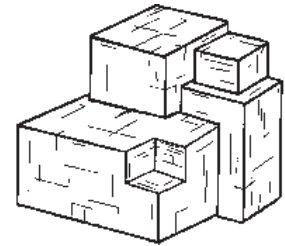
Quartz



Amphibole



Pyroxene



Galena

Which of these samples would not scratch a glass plate?

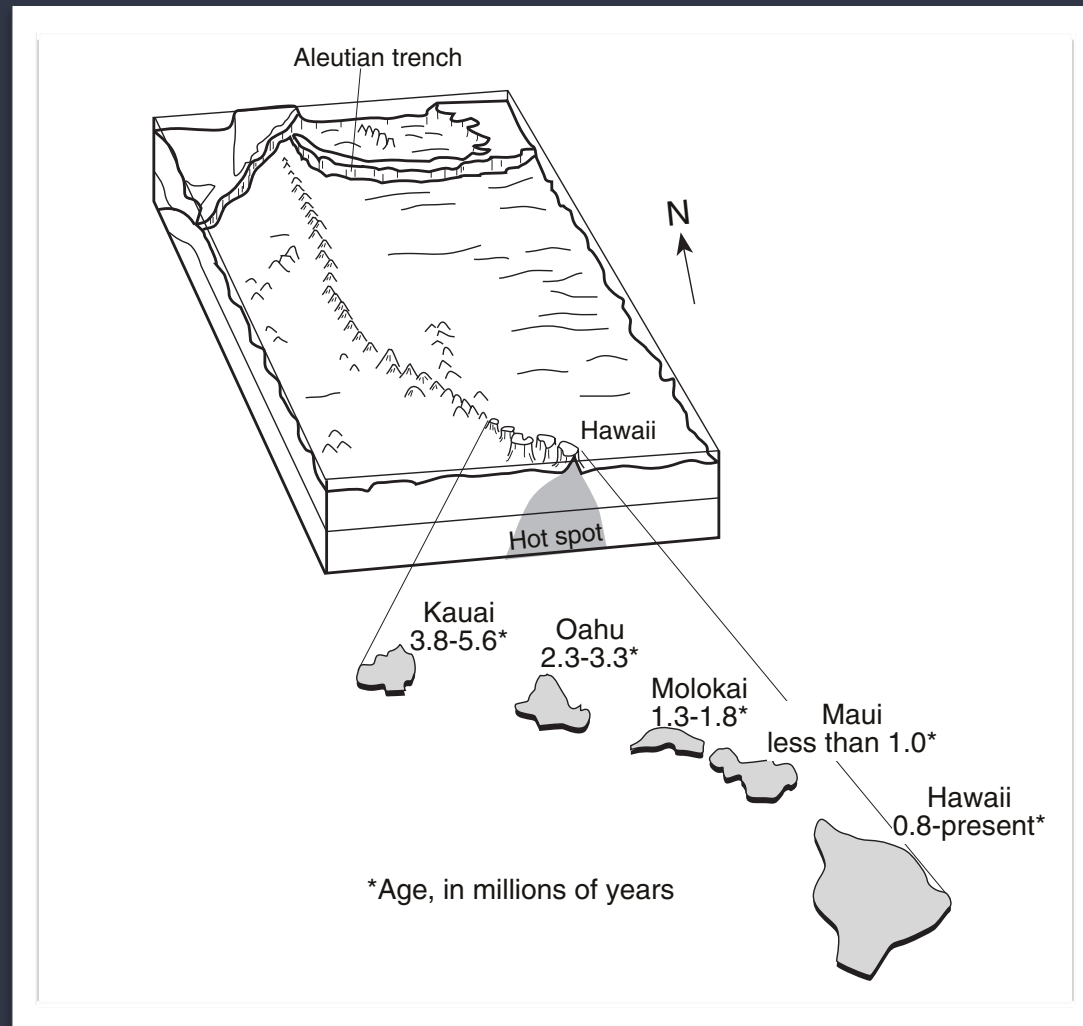
BACK

#26

NEXT

ANSWER:

Galena



Based on the locations of the extinct volcanoes, what direction is the Pacific Plate currently moving?

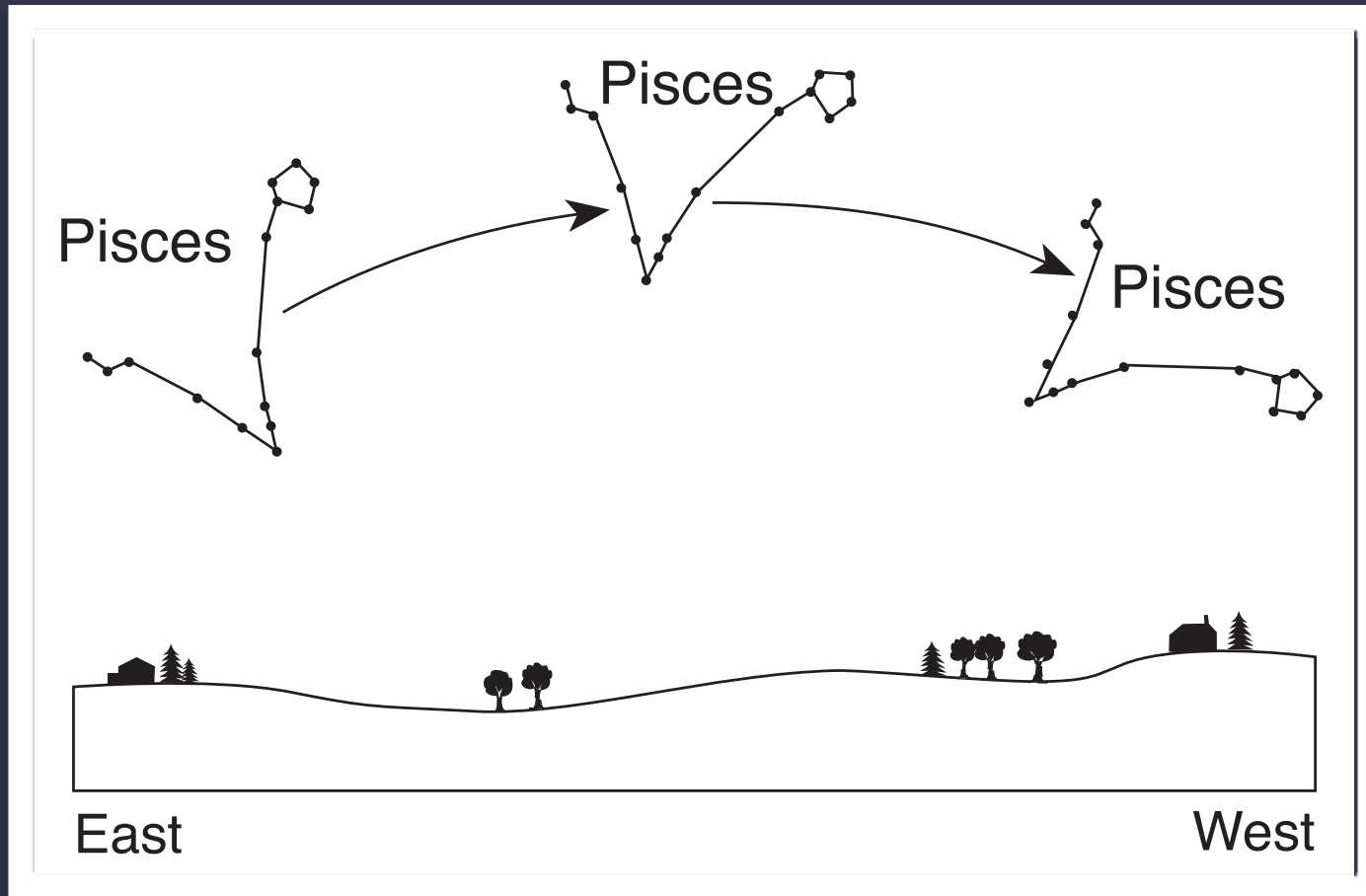
BACK

#27

NEXT

ANSWER:

Northwest



What motion causes the apparent movement of the constellation Pisces?

BACK

#28

NEXT

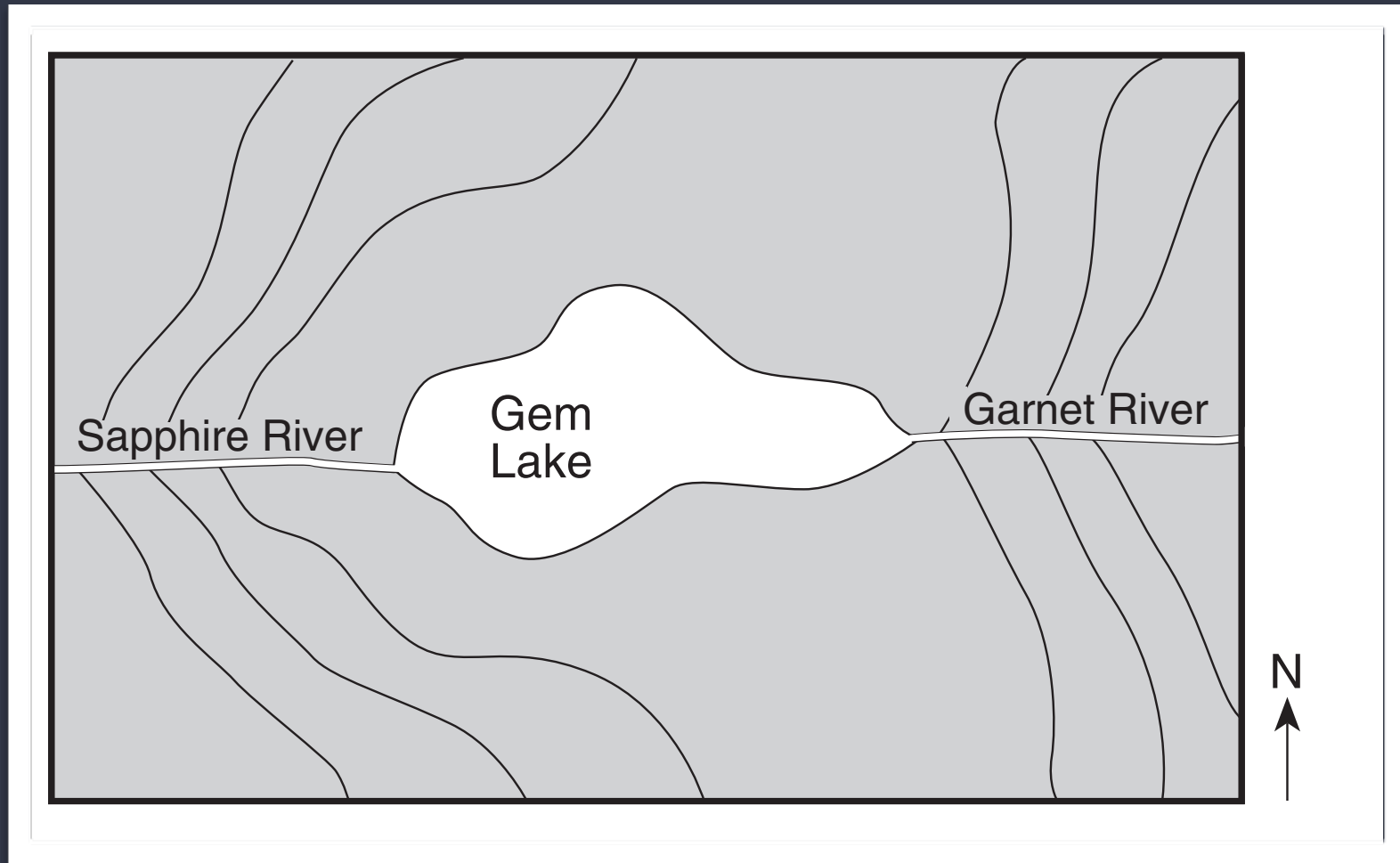
ANSWER:

Earth's Rotation

BACK

#29

NEXT



What compass direction is Sapphire River flowing?
What compass direction is Garnet River flowing?

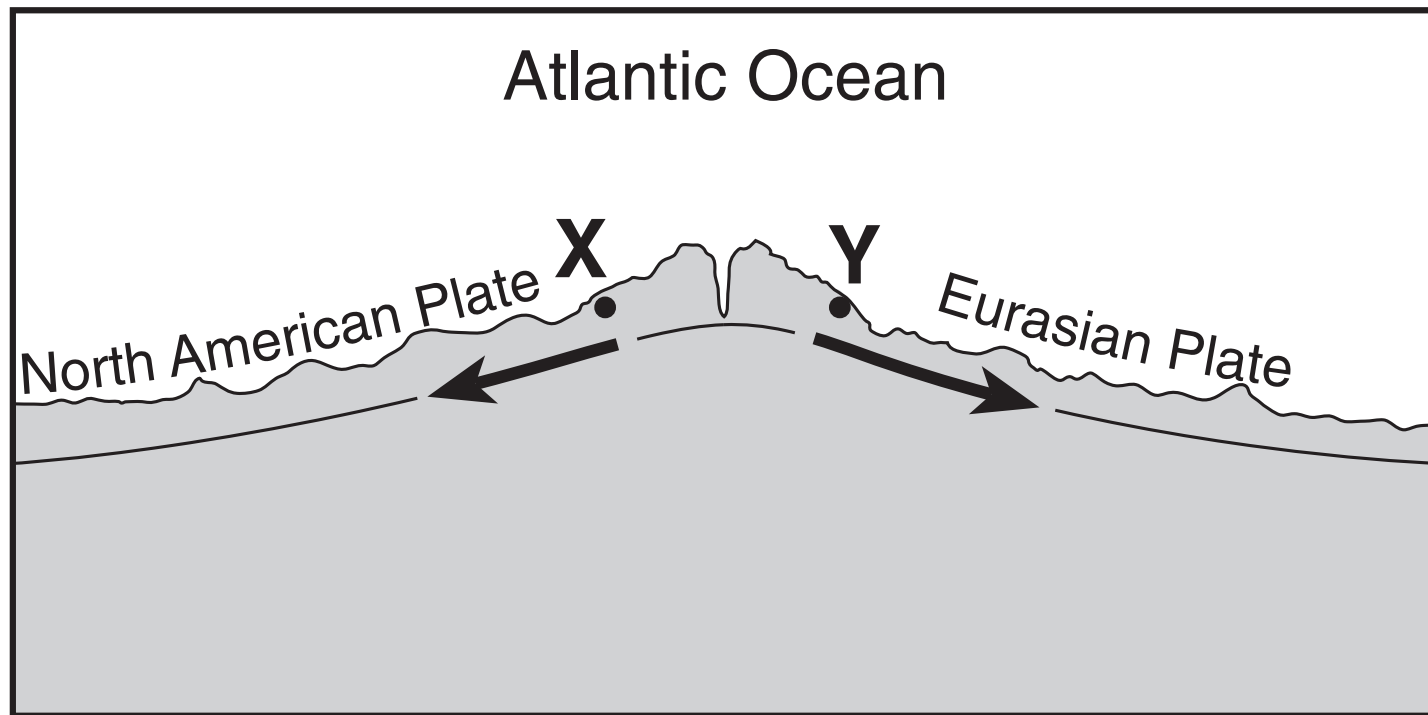
BACK

#29

NEXT

ANSWER:

Both flowing East (flowing out of the “V”)



How does the age of the rocky at point X compare with the age of the rock at point Y?

BACK

#30

NEXT

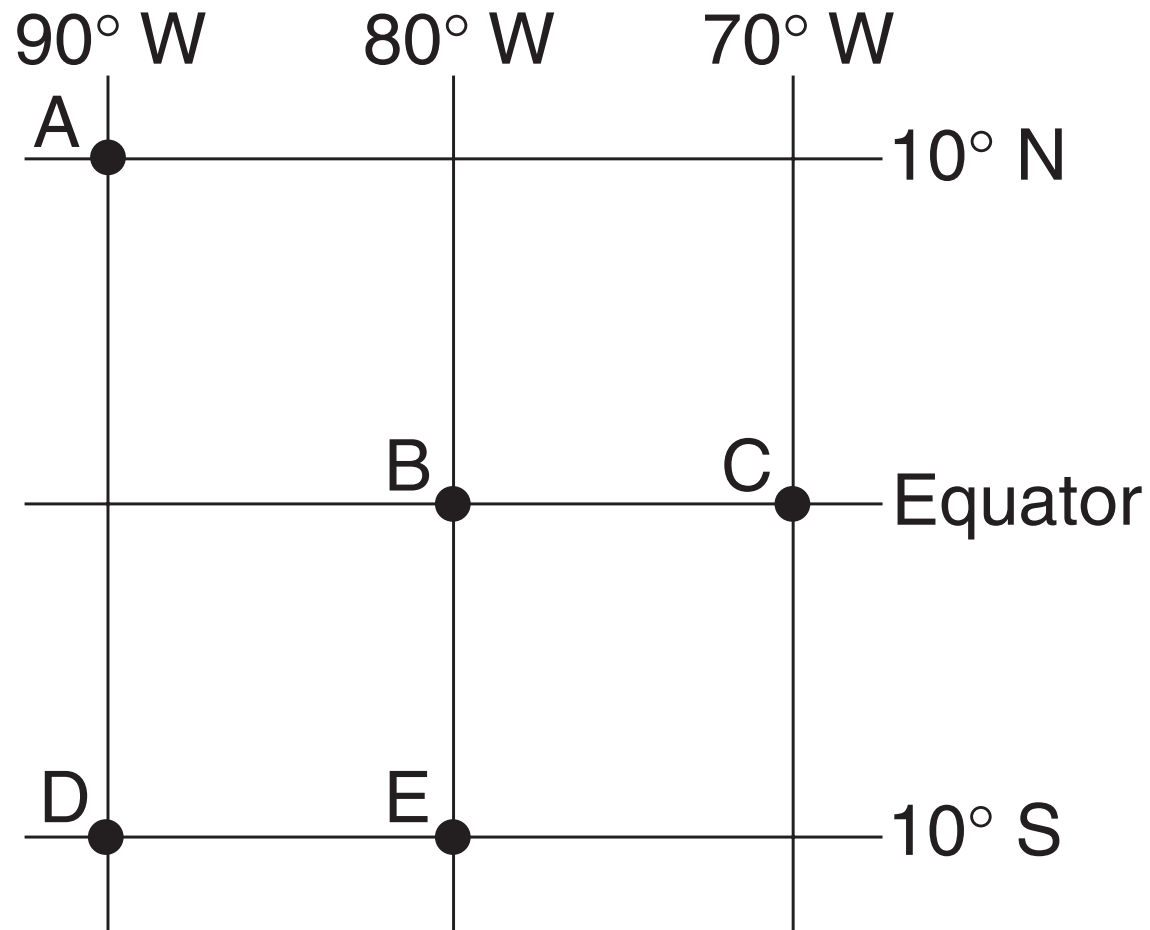
ANSWER:

Same age-equal distance from the ridge

BACK

#31

NEXT



What happens to the altitude of Polaris as you travel from point D to point A?

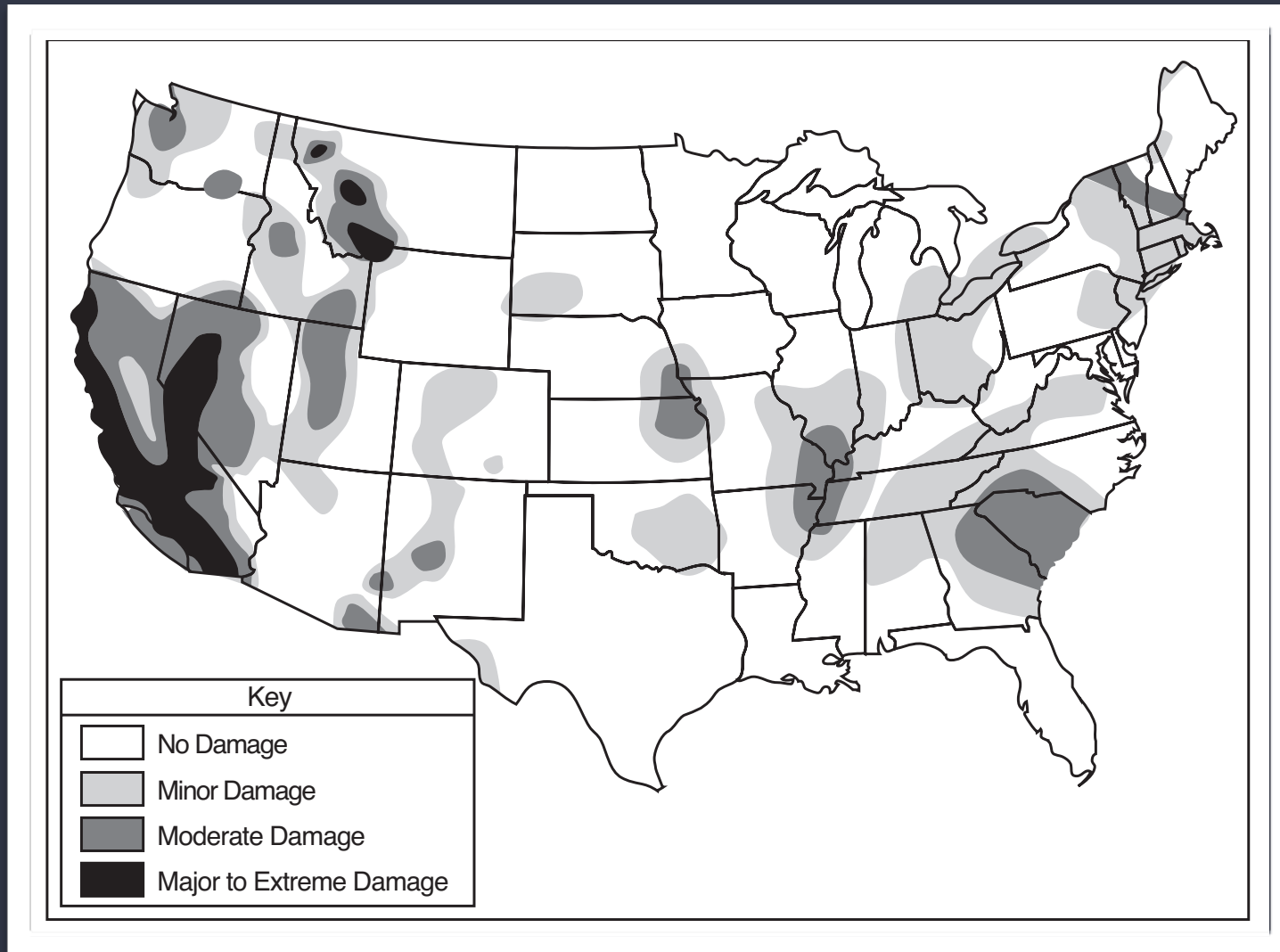
BACK

#31

NEXT

ANSWER:

It gets higher in the sky



Explain why there is very little chance of earthquake damage in the center of the United States.

BACK

#32

NEXT

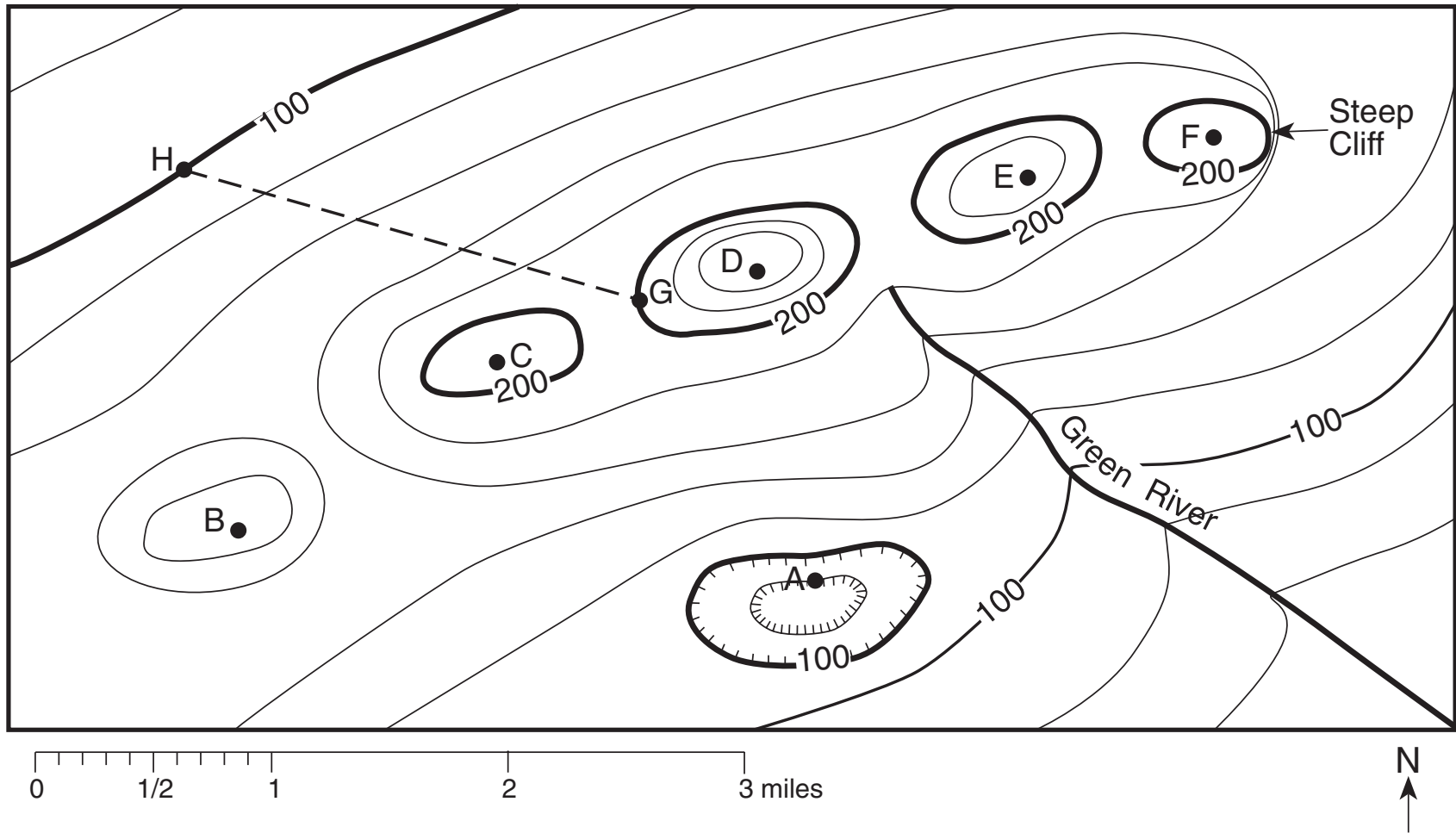
ANSWER:

Not near a plate boundary

BACK

#33

NEXT



What is the elevation of point A?

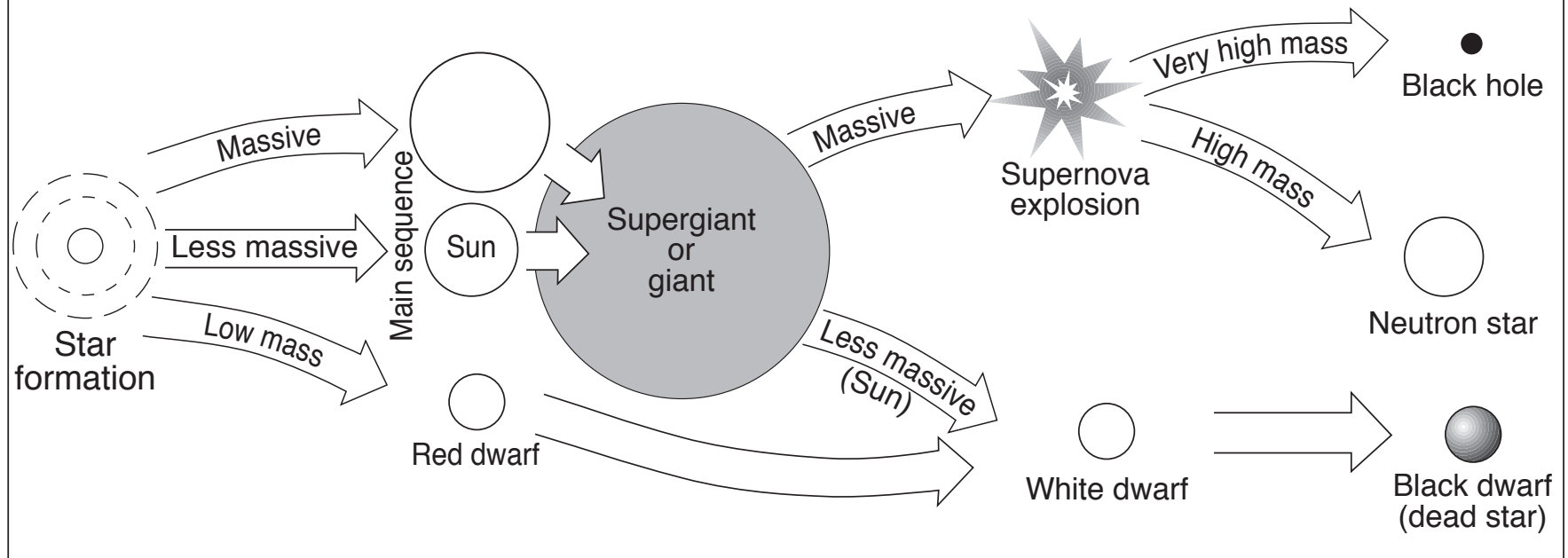
BACK

#33

NEXT

ANSWER:

80 feet



(Not drawn to scale)

What factor determines whether a star will die as a black hole, neutron star, or black dwarf?

BACK

#34

NEXT

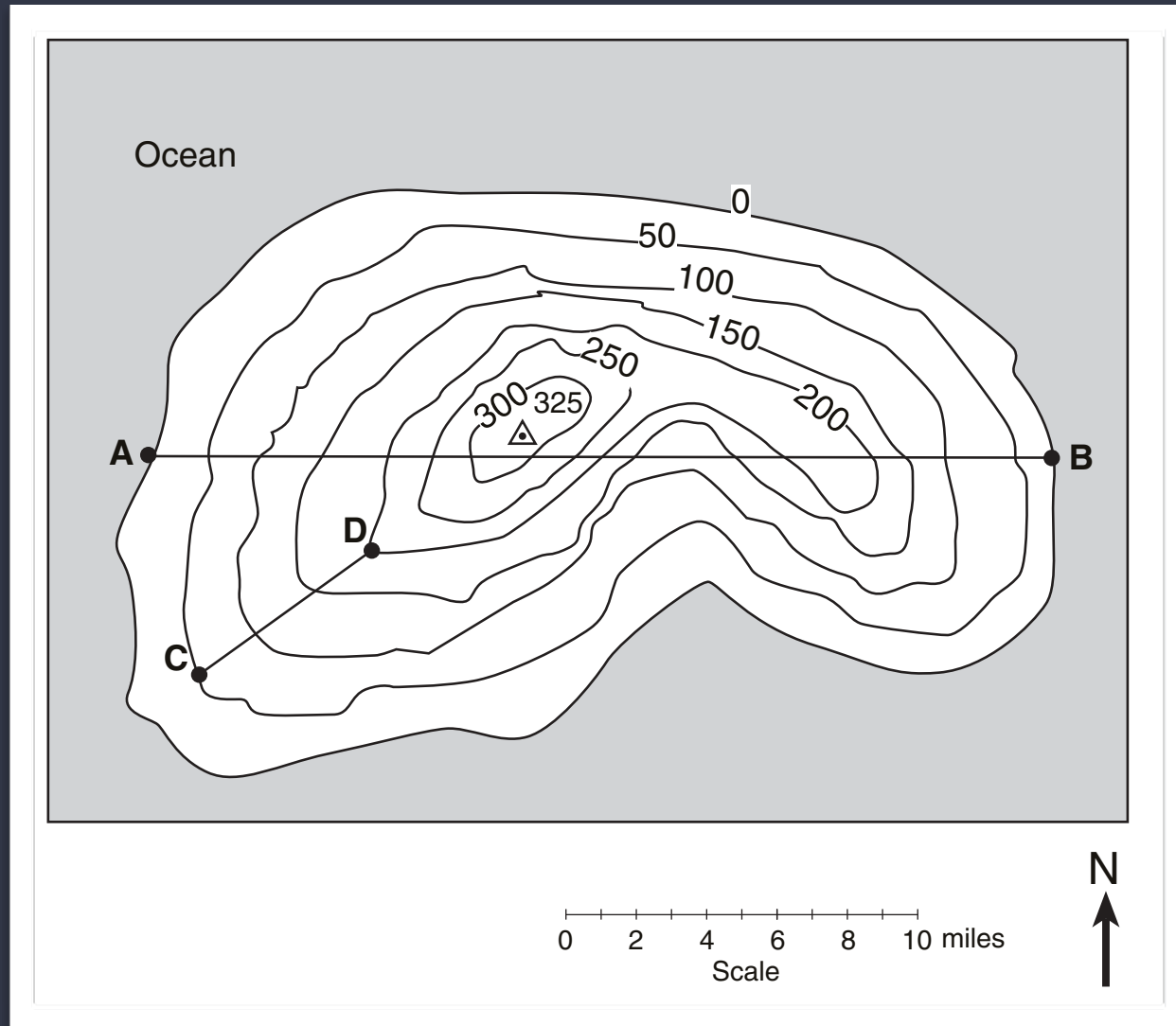
ANSWER:

Its Mass

BACK

#35

NEXT



What is the approximate gradient between points C and D?
(record your answer to the nearest tenth, and include units)

BACK

#35

NEXT

ANSWER:

Elevation of D: 200 feet

Elevation of C: 50 feet

(subtract the field value: 150 feet)

Distance between C and D is about 6 miles

$$150 \text{ feet} / 6 \text{ miles} = 25.0 \text{ feet/mile}$$

BACK

#36

NEXT



What are the approximate coordinates of Rio de Janeiro?
What are the approximate coordinates of Arica?

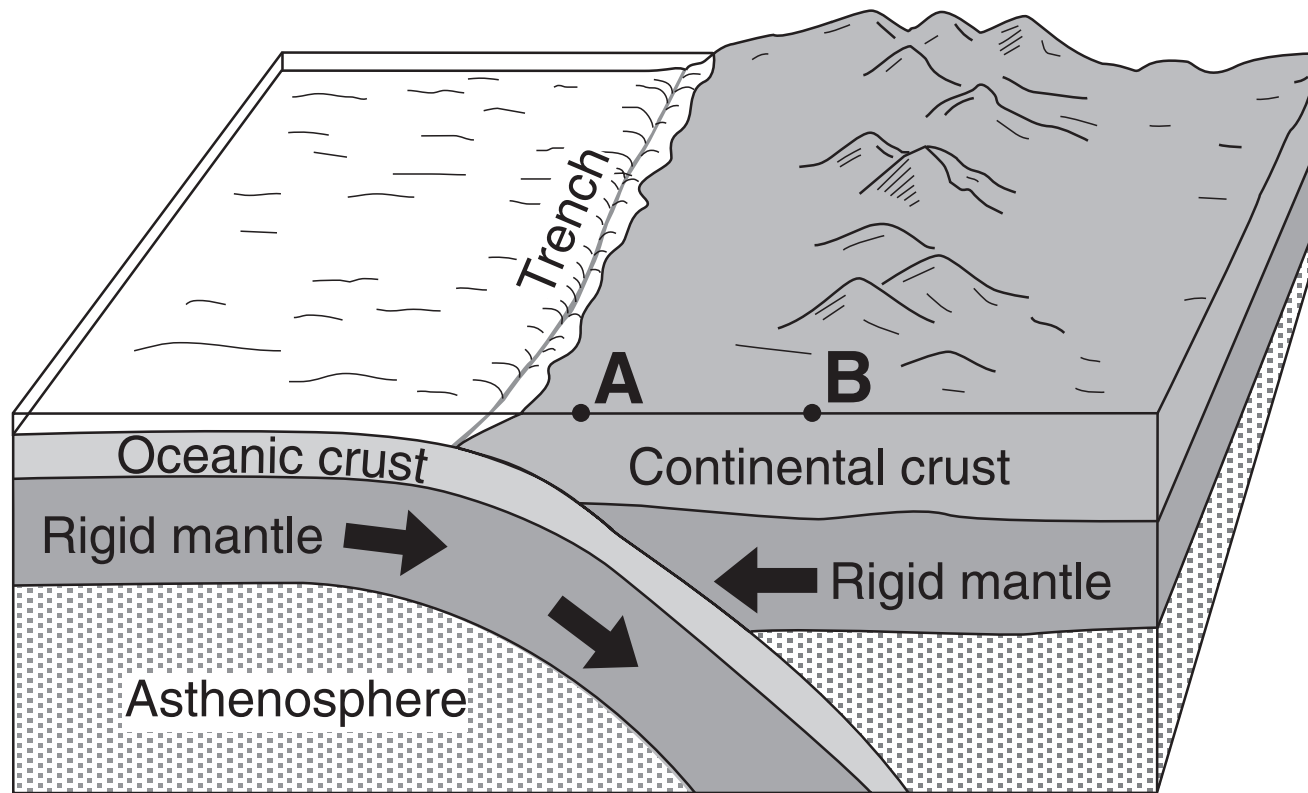
BACK

#36

NEXT

ANSWER:

Rio: 22° S, 43° W
Arica: 19° S, 75° W



(Not drawn to scale)

What happens to the depth of earthquakes as you travel from point A to point B?

BACK

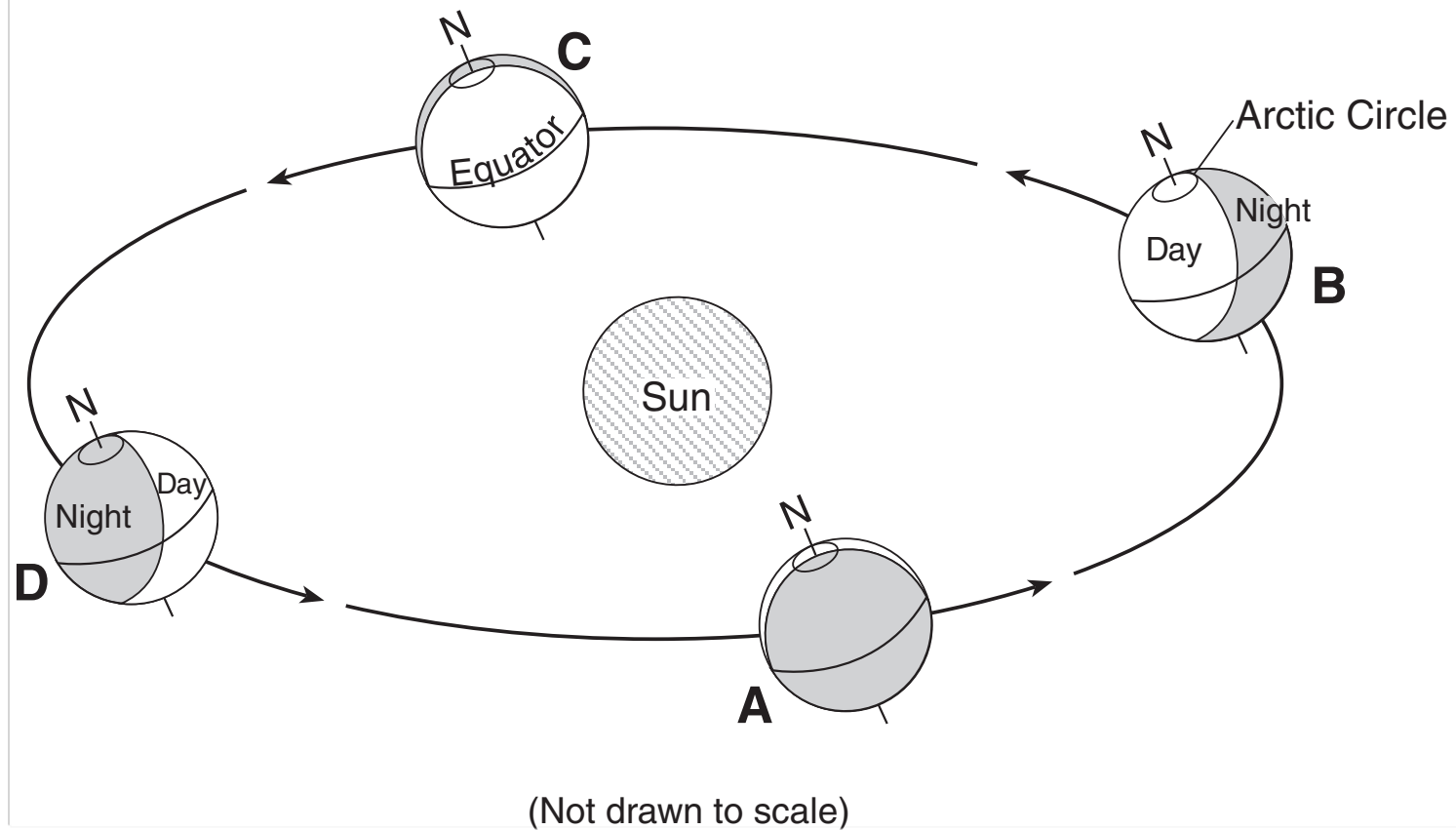
#37

NEXT

ANSWER:

Earthquakes get deeper

Diagram 1



What is the altitude of the noon sun in NY when the Earth is at position D?

BACK

#38

NEXT

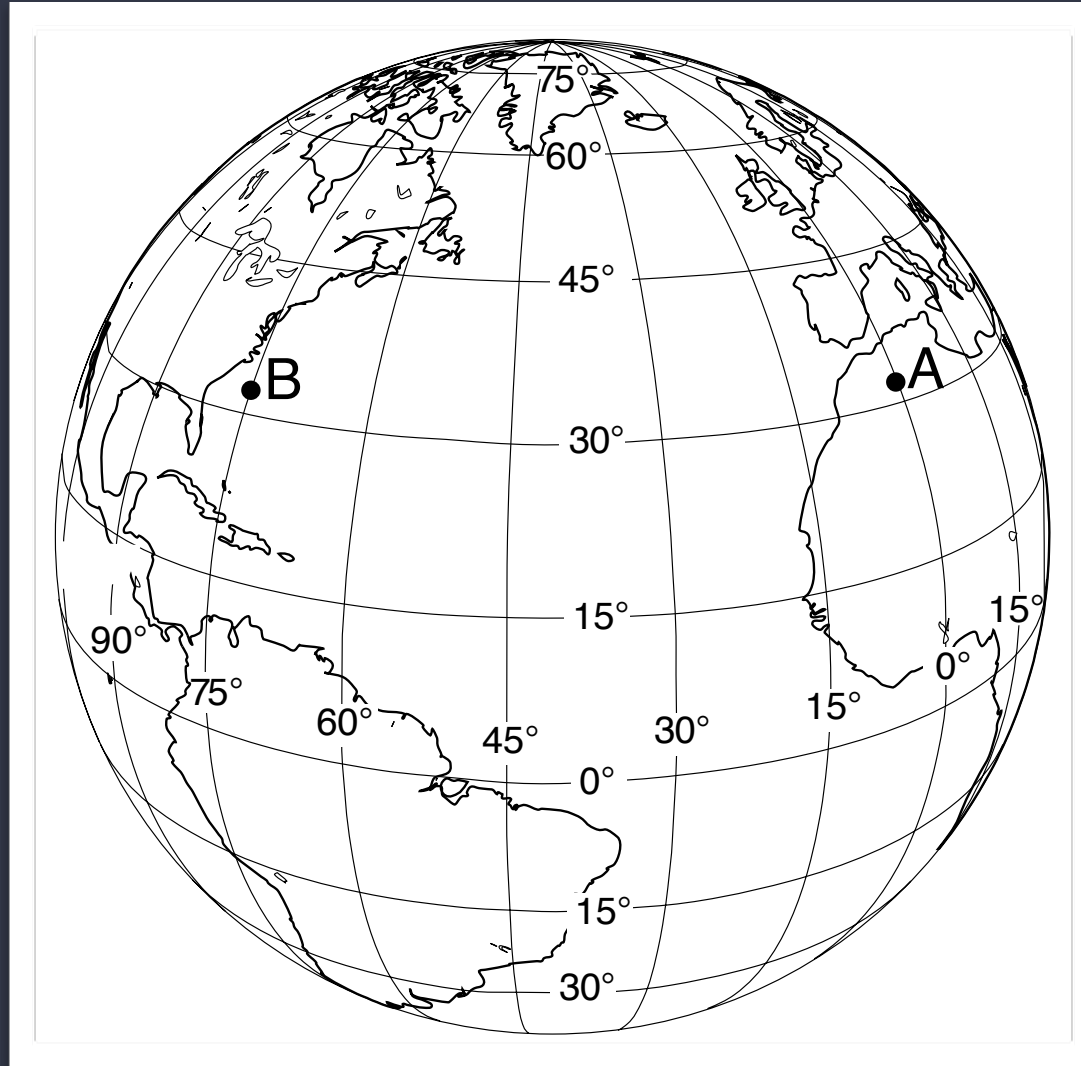
ANSWER:

24.5° (winter)

BACK

#39

NEXT



How many hours time difference are there between locations A and B? Which location is earlier?

BACK

#39

NEXT

ANSWER:

5 hours difference

B is earlier (as you go west, the time gets less)

Latitude	Day 1 Duration of Insolation (hours)	Day 2 Duration of Insolation (hours)	Day 3 Duration of Insolation (hours)
90° N	24	12	0
80° N	24	12	0
70° N	24	12	0
60° N	$18\frac{1}{2}$	12	$5\frac{1}{2}$
50° N	$16\frac{1}{4}$	12	$7\frac{3}{4}$
40° N	15	12	9
30° N	14	12	10
20° N	$13\frac{1}{4}$	12	$10\frac{3}{4}$
10° N	$12\frac{1}{2}$	12	$11\frac{1}{2}$
0°	12	12	12

What are the dates of Day 1, Day 2, and Day 3?

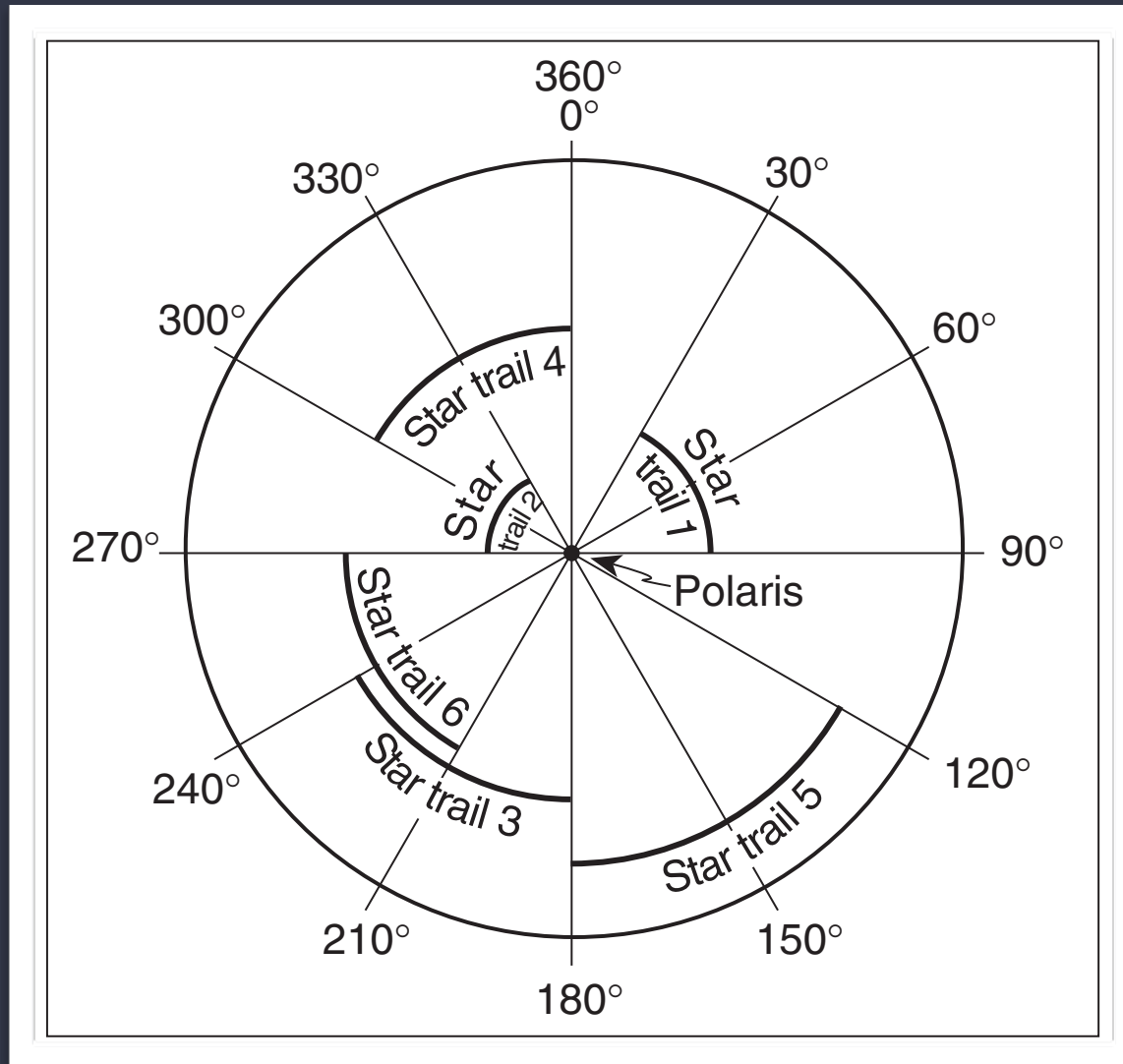
BACK

#40

NEXT

ANSWER:

Day 1 is Summer
Day 2 is Fall or Spring
Day 3 is Winter



What motion is responsible for the apparent movement of the stars as seen in the diagram?

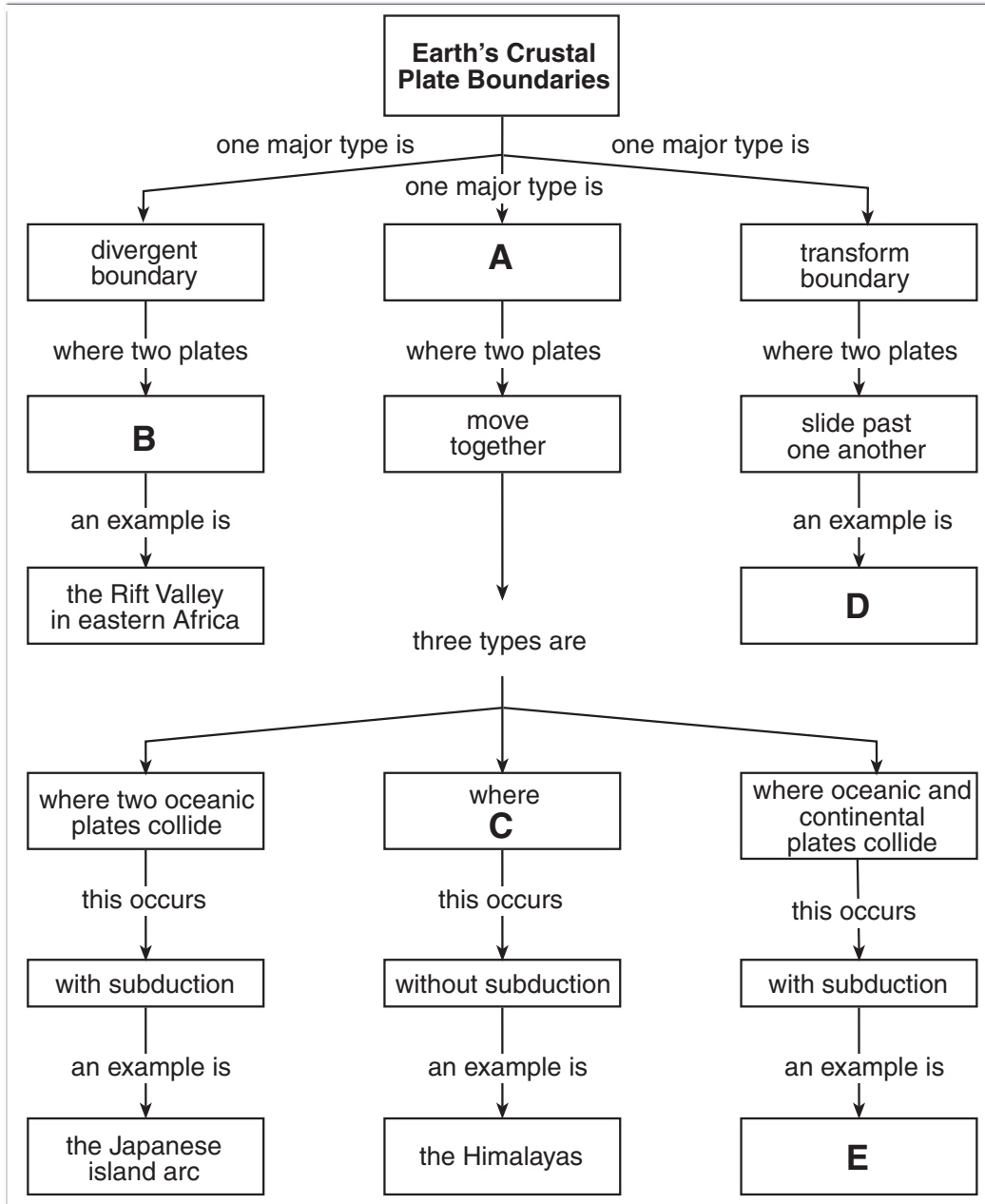
BACK

#41

NEXT

ANSWER:

Earth Rotation



Identify A, B, C, D, and E.

BACK

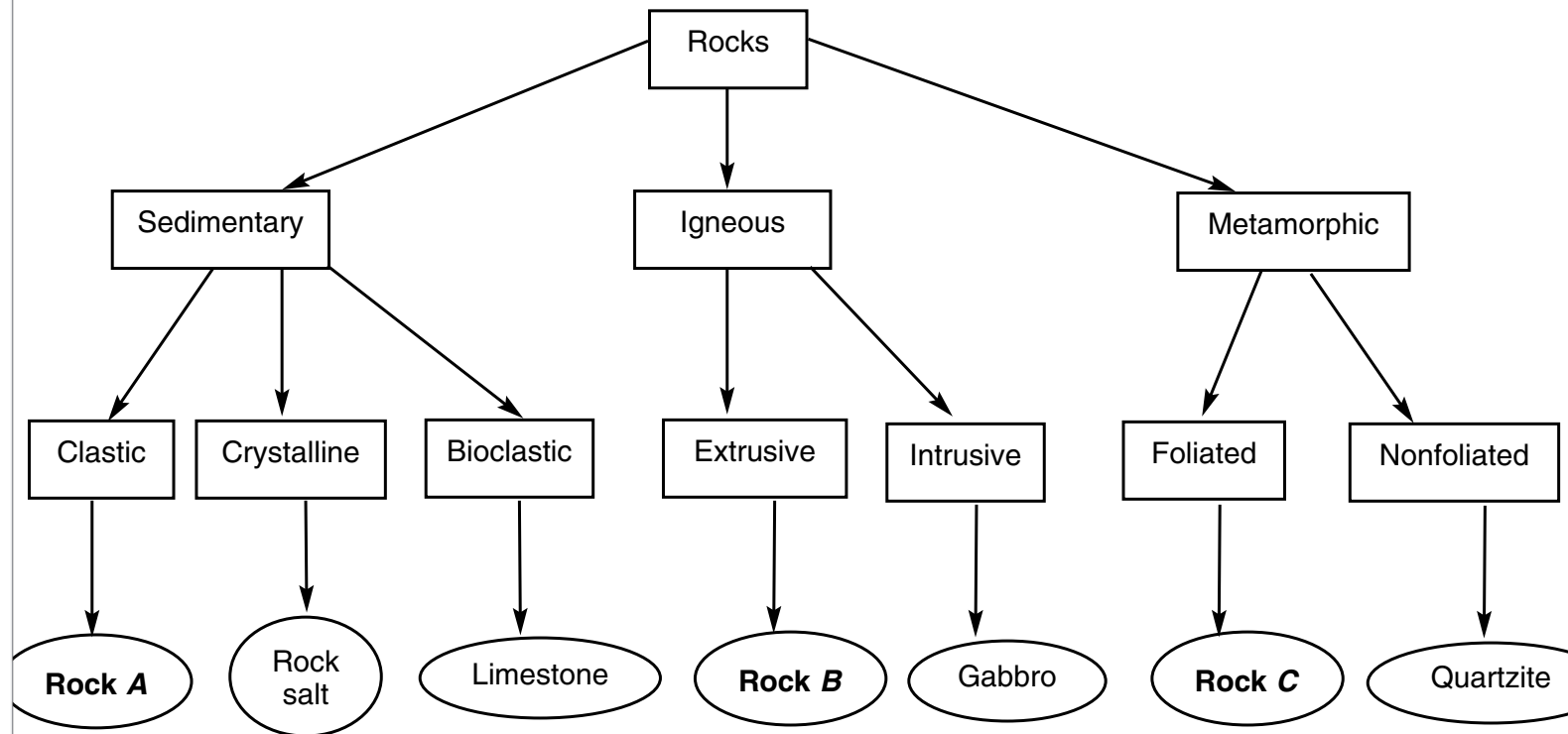
#42

NEXT

ANSWER:

A-Convergent
B-Plates Pull Apart
C-Continent to Continent
D-San Andreas Fault
E-Juan de Fuca and North America

Rock Classification Flowchart



What could rock A be?
What could rock B be?
What could rock C be?

BACK

#43

NEXT

ANSWER:

Rock A-Conglomerate, Breccia, Sandstone, Siltstone, Shale

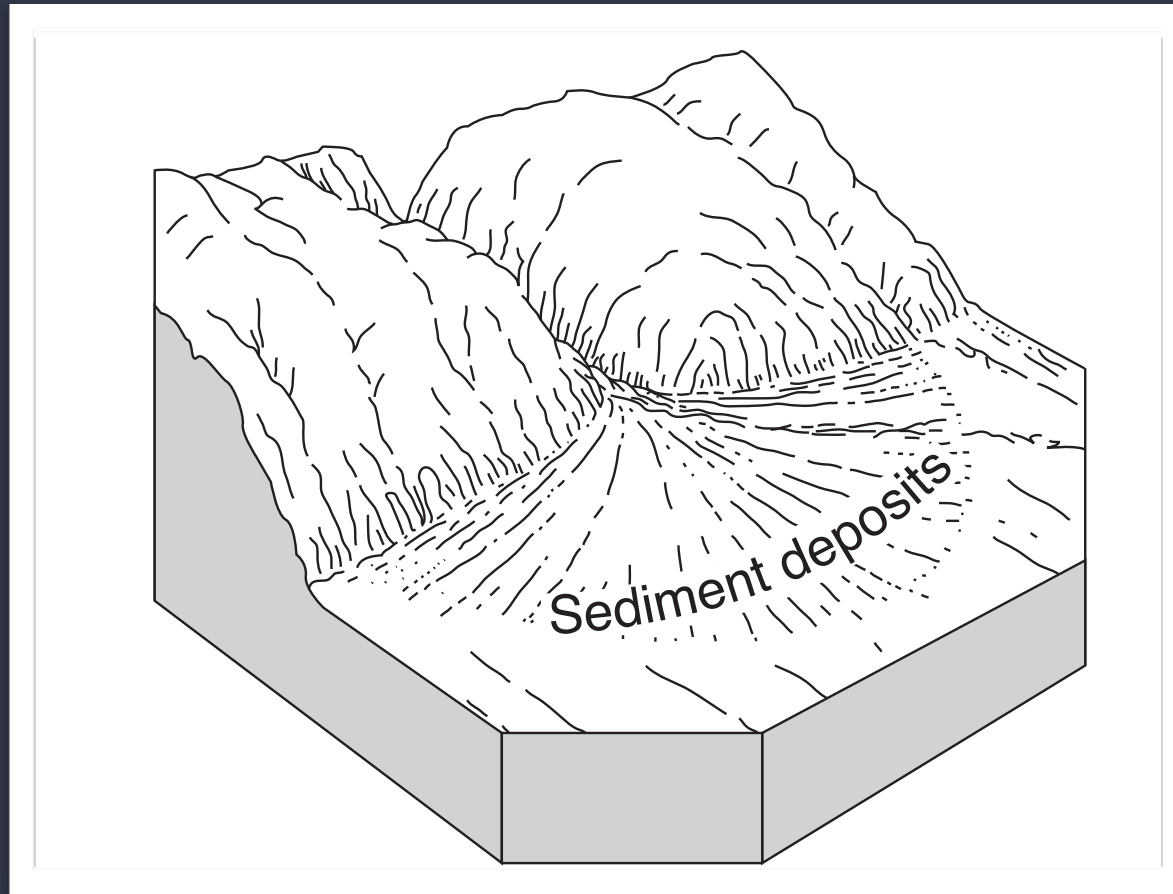
Rock B-Rhyolite, Basalt

Rock C-Gneiss, Slate, Phyllite, Schist

BACK

#44

NEXT



What agent of erosion deposited this sediment?

BACK

#44

NEXT

ANSWER:

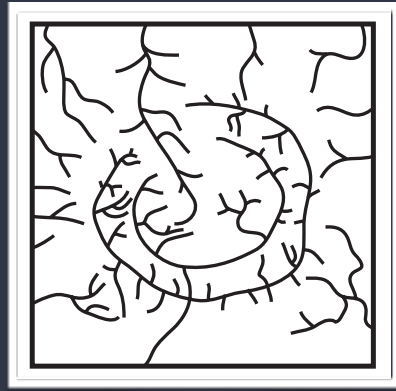
Running Water

BACK

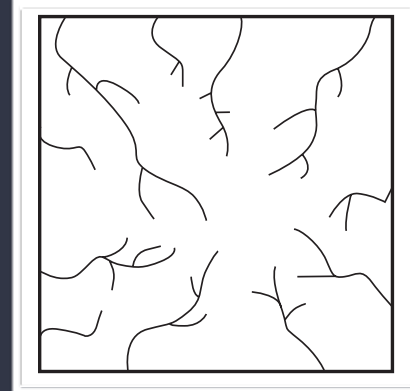
#45

NEXT

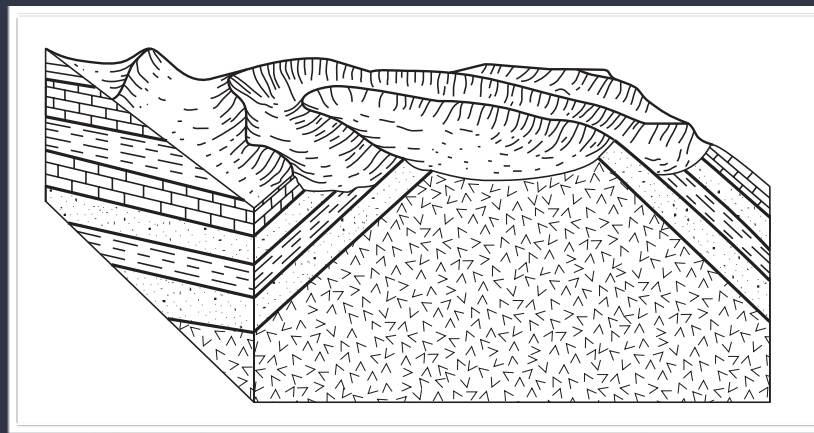
A



B



What drainage pattern fits the landscape?



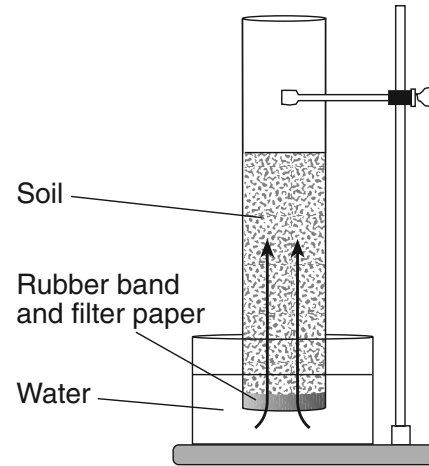
BACK

#45

NEXT

ANSWER:

A



Data Table

Average Soil Particle Diameter (cm)	Height of Water in Column (cm)
0.006	30.0
0.2	8.0
1.0	0.5

What is the upward movement of water called?
What size (big or small) has the most water retention?

BACK

#46

NEXT

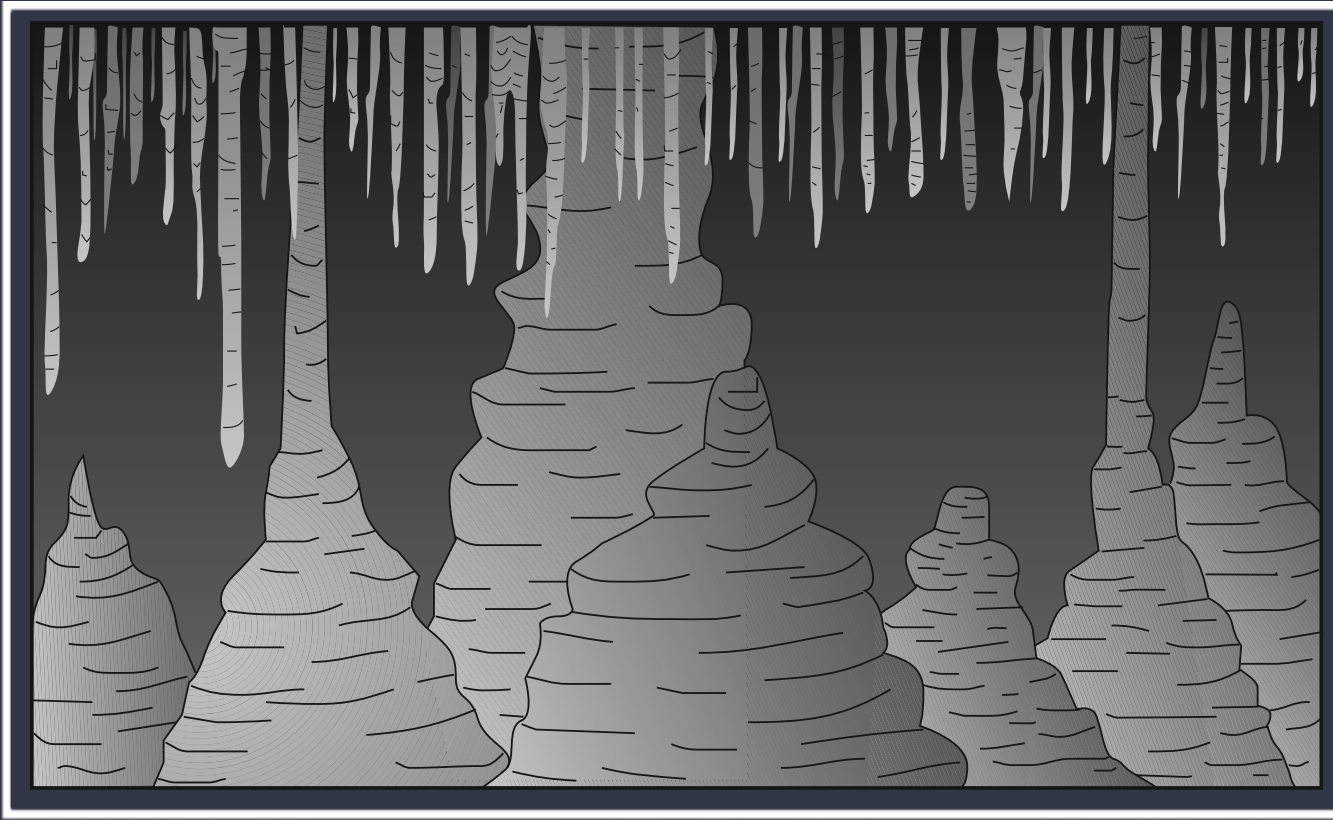
ANSWER:

Capillarity
Really small particles

BACK

#47

NEXT



What type of chemical weathering forms caves?

BACK

#47

NEXT

ANSWER:

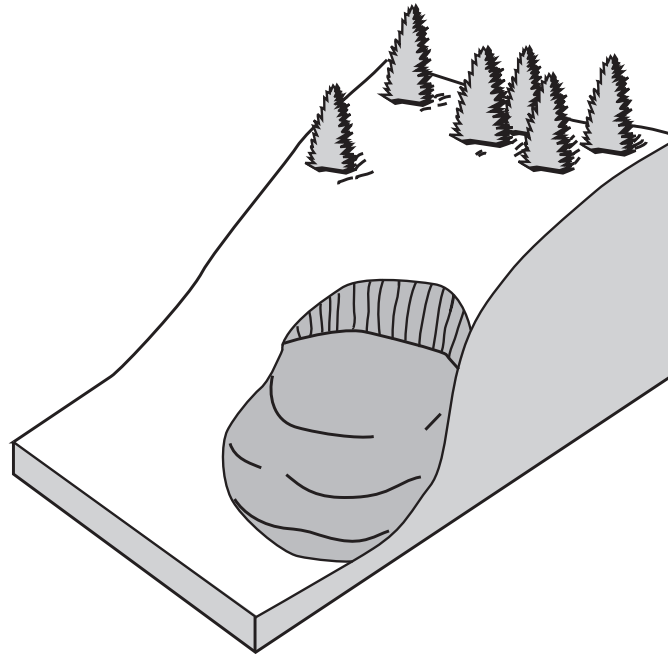
Carbonation

BACK

#48

NEXT

Debris flow



Rapid downslope flow
of debris

What agent of erosion caused the debris flow?

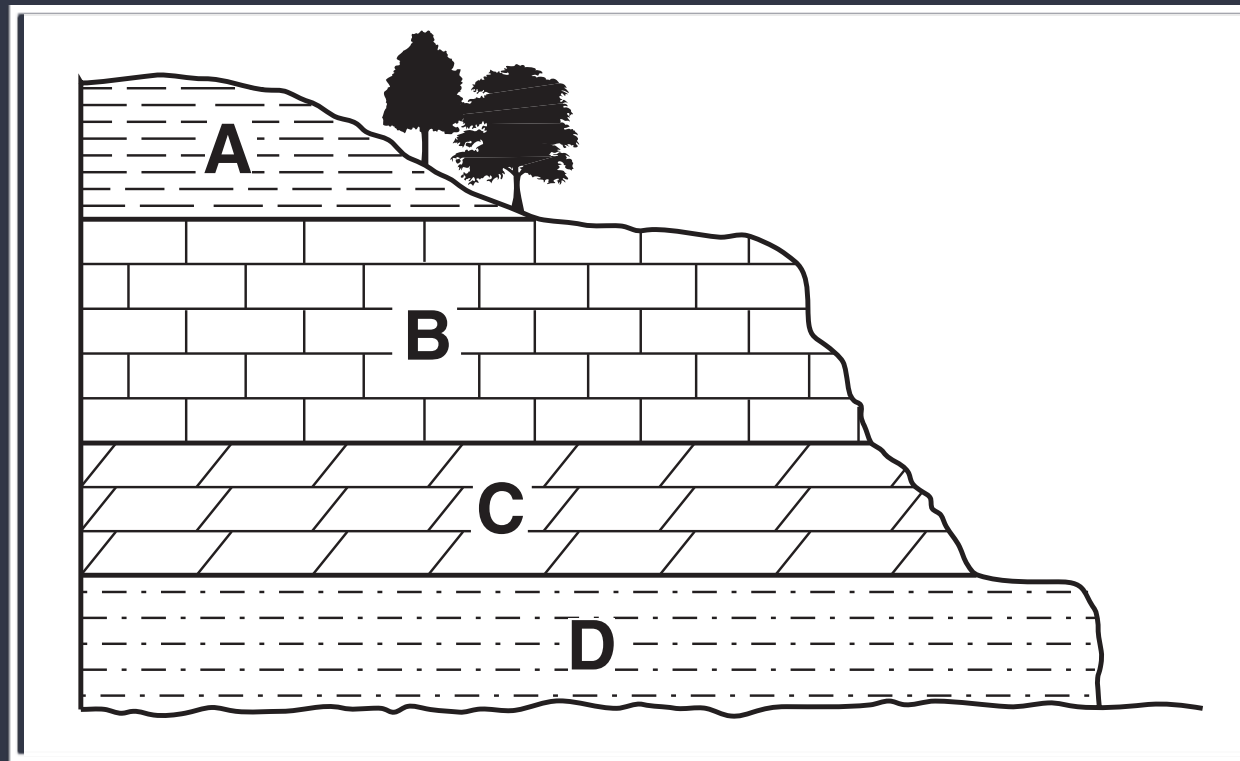
BACK

#48

NEXT

ANSWER:

Gravity



What layer is most resistant to weathering?

BACK

#49

NEXT

ANSWER:

D-Shale layer

BACK

#50

NEXT

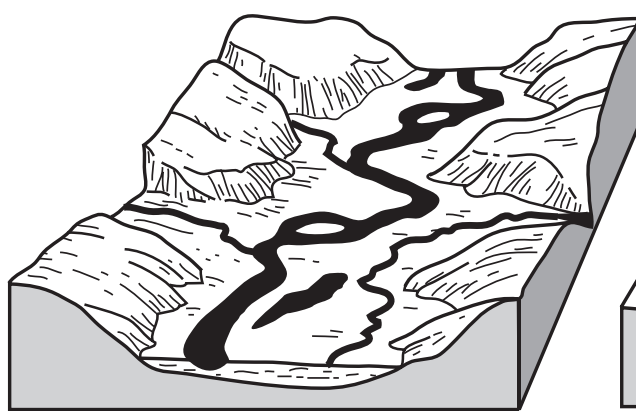


Diagram A

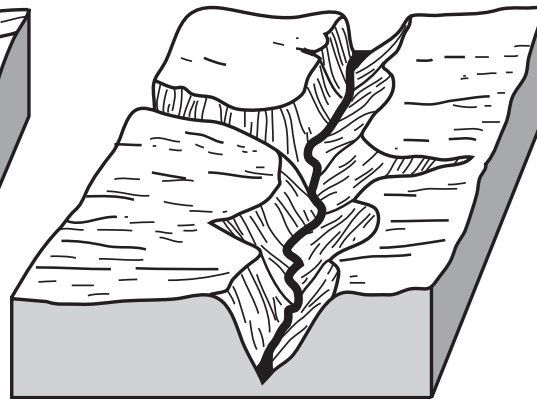


Diagram B

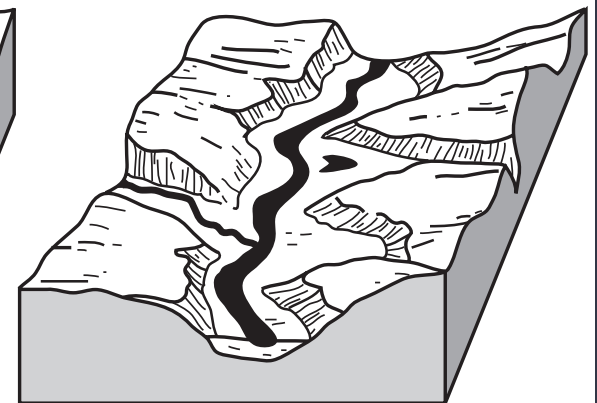


Diagram C

Which diagram shows the youngest river and why?

BACK

#50

NEXT

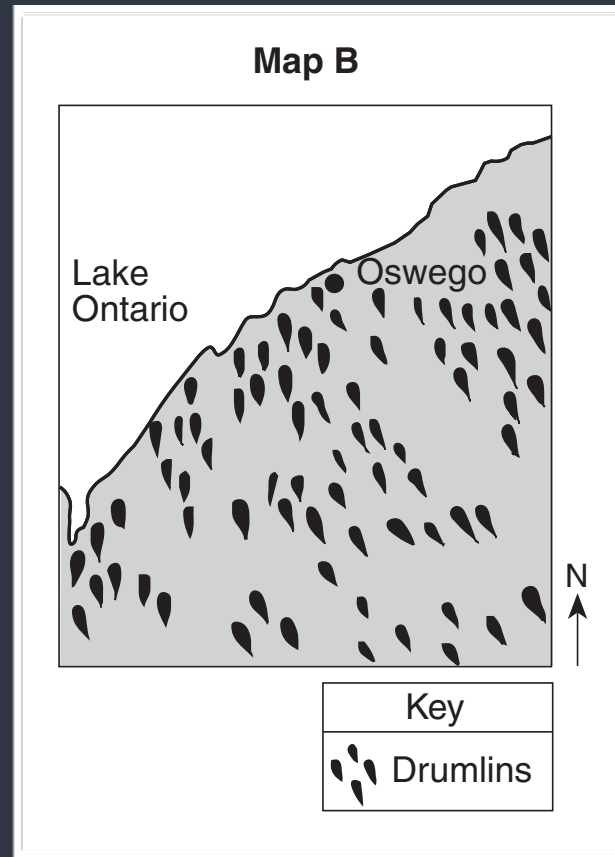
ANSWER:

Diagram B with the V shape valley

BACK

#51

NEXT



What agent of erosion formed the Drumlins?

BACK

#51

NEXT

ANSWER:

Glaciers

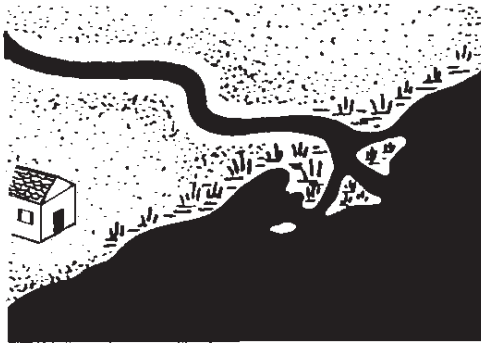
BACK

#52

NEXT



Stage 1



Stage 2



Stage 3

What is this feature called and how does it form?

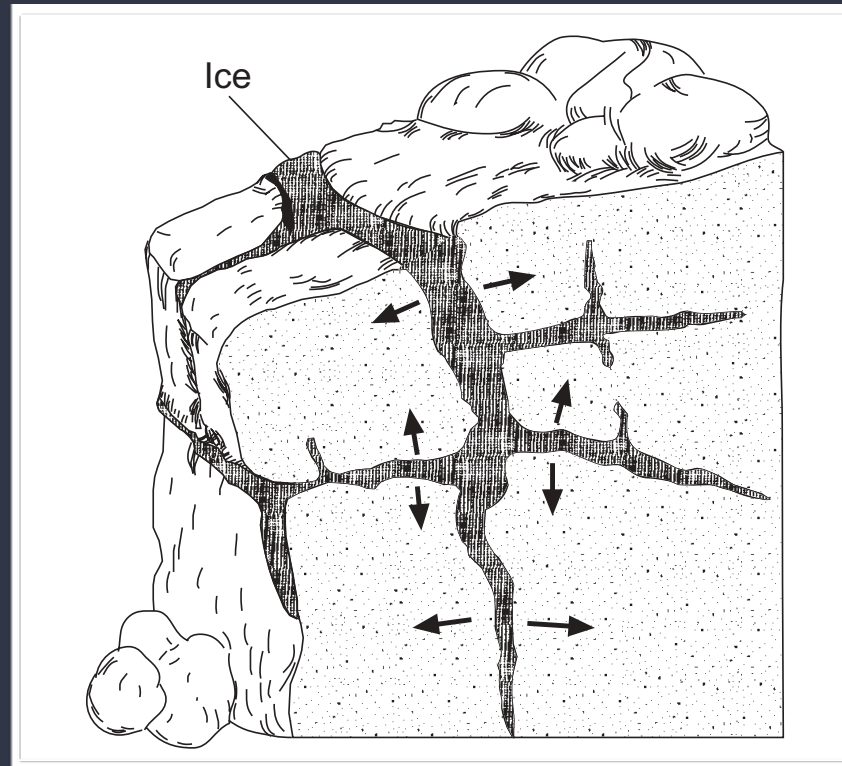
BACK

#52

NEXT

ANSWER:

Delta formed by running water entering an ocean



What type of weathering is this called?

BACK

#53

NEXT

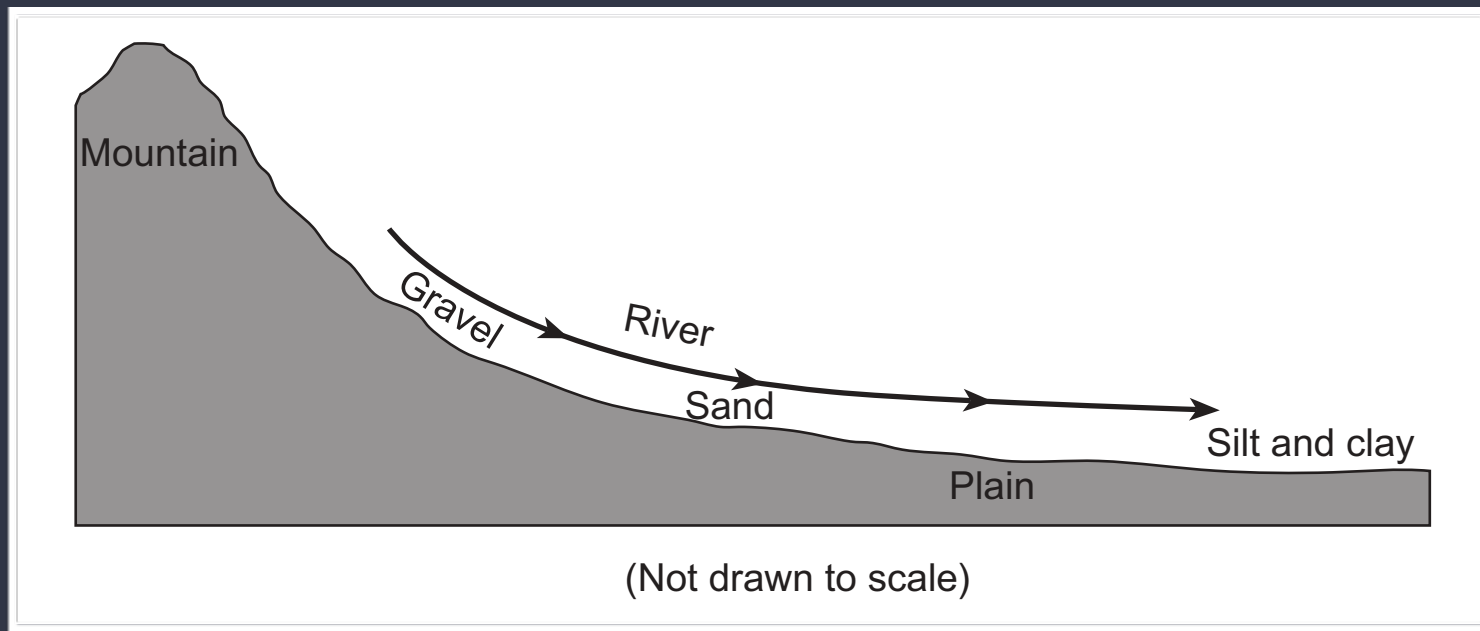
ANSWER:

Frost Wedging
or
Frost Action

BACK

#54

NEXT



What type of sorting is this called?

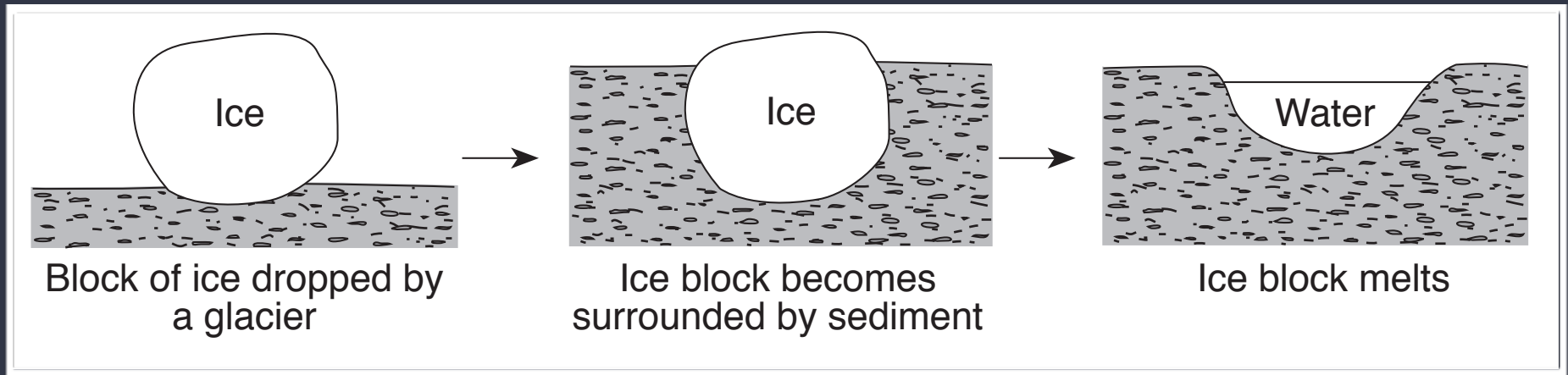
BACK

#54

NEXT

ANSWER:

Horizontal Sorting



The lake formed when a massive ice block is dropped off by a glacier, buried in sediment and then melts is called..?

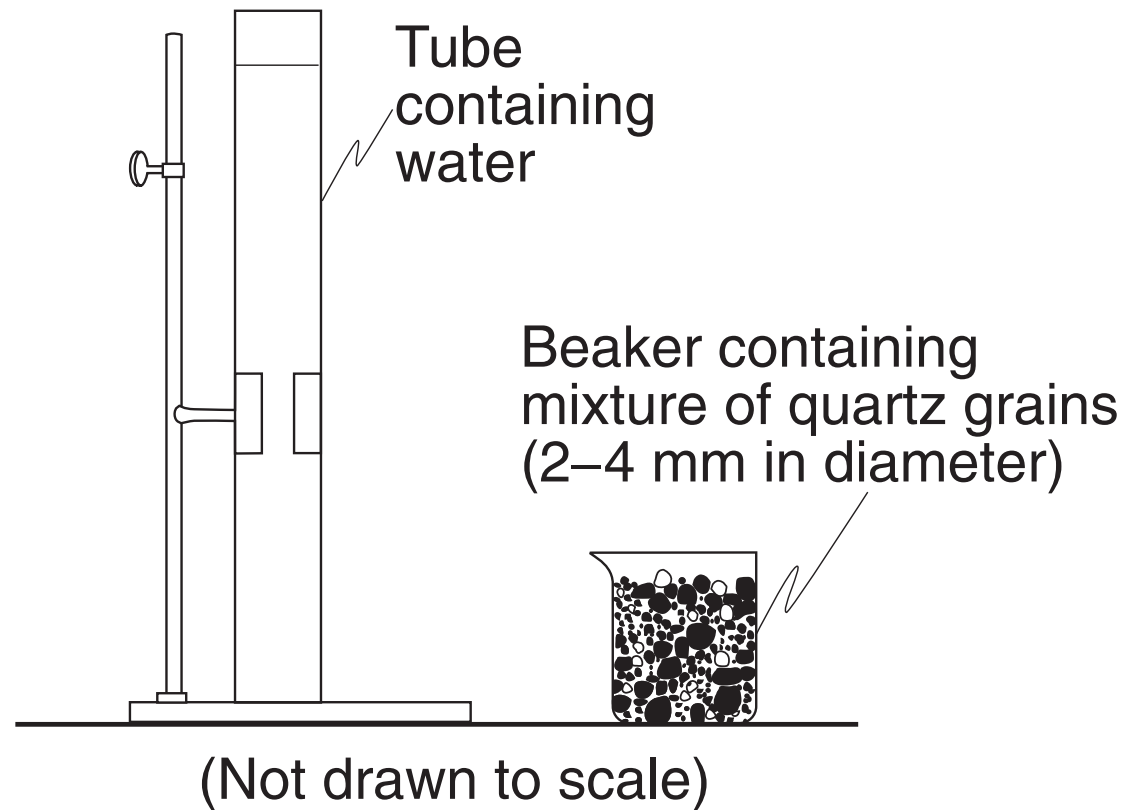
BACK

#55

NEXT

ANSWER:

A Kettle Lake



Dropping all mixed particles into the tube of water will give you what type of sorting?

BACK

#56

NEXT

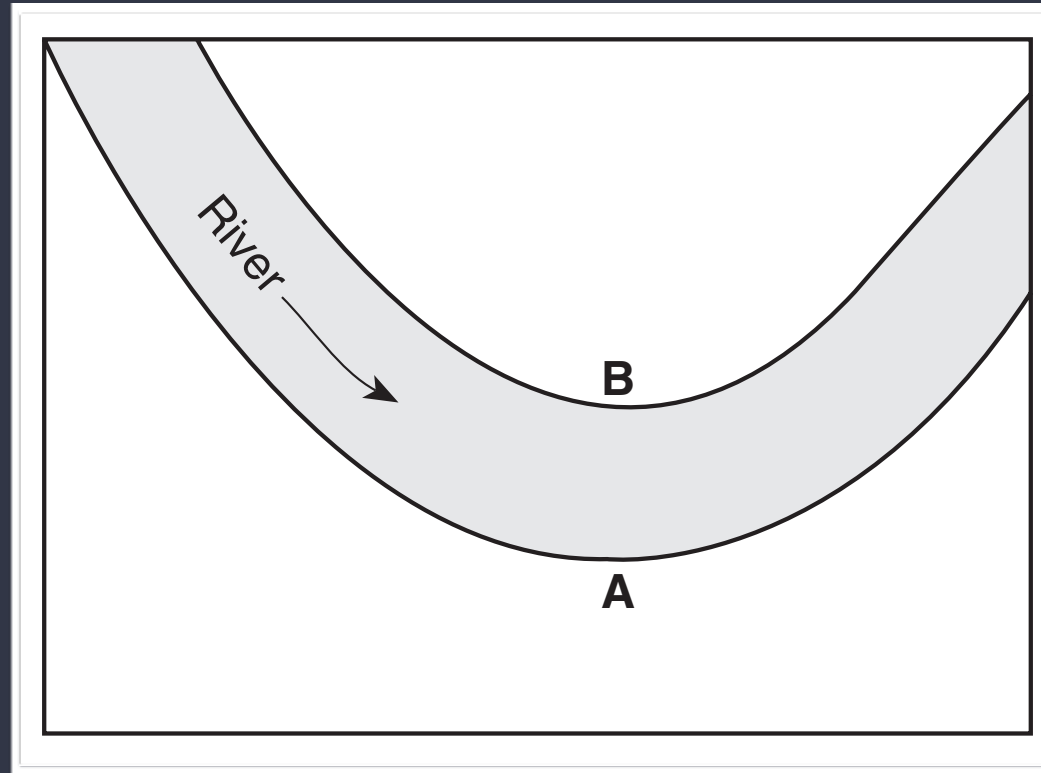
ANSWER:

Vertical sorting

BACK

#57

NEXT



What is happening at A and B (think erosion/deposition)
Where does water have the fastest velocity?
What is a turn called within a stream?

BACK

#57

NEXT

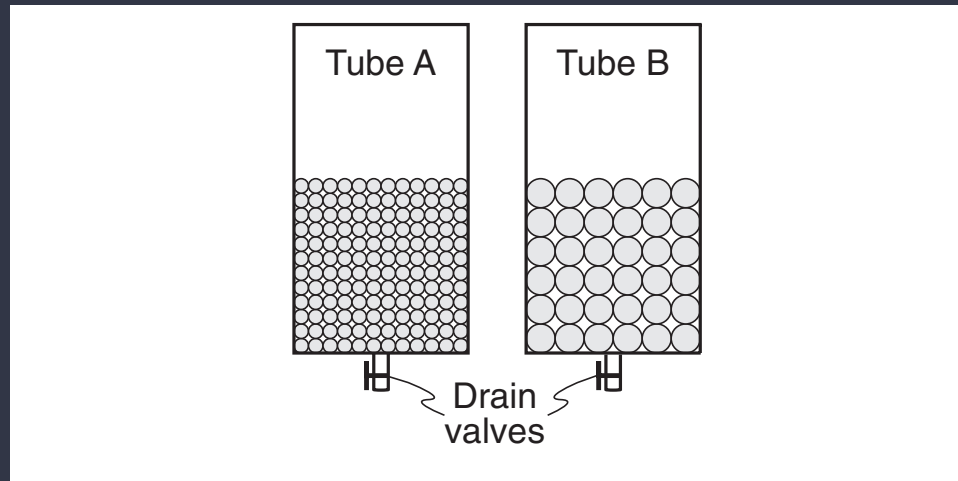
ANSWER:

A=has erosion

B=has deposition

A=has the fastest water velocity

A turn is called a meander



Data Table 1: Tube A	
water required to fill pore spaces	124 mL
time required for draining	2.1 sec
water that remained around the beads after draining	36 mL

What tube has the greatest permeability?

BACK

#58

NEXT

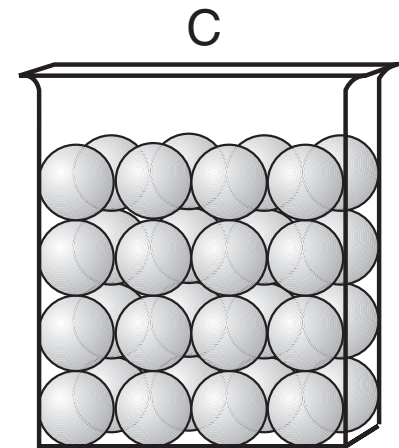
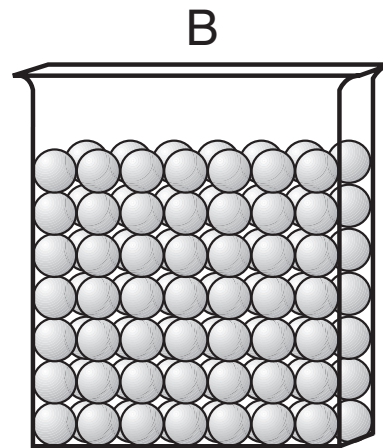
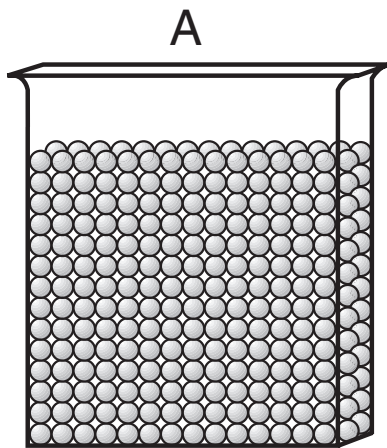
ANSWER:

Tube B

BACK

#59

NEXT



What container has the greatest porosity?

BACK

#59

NEXT

ANSWER:

They are all the same!

BACK

#60

NEXT



What is the rounding of rocks called?

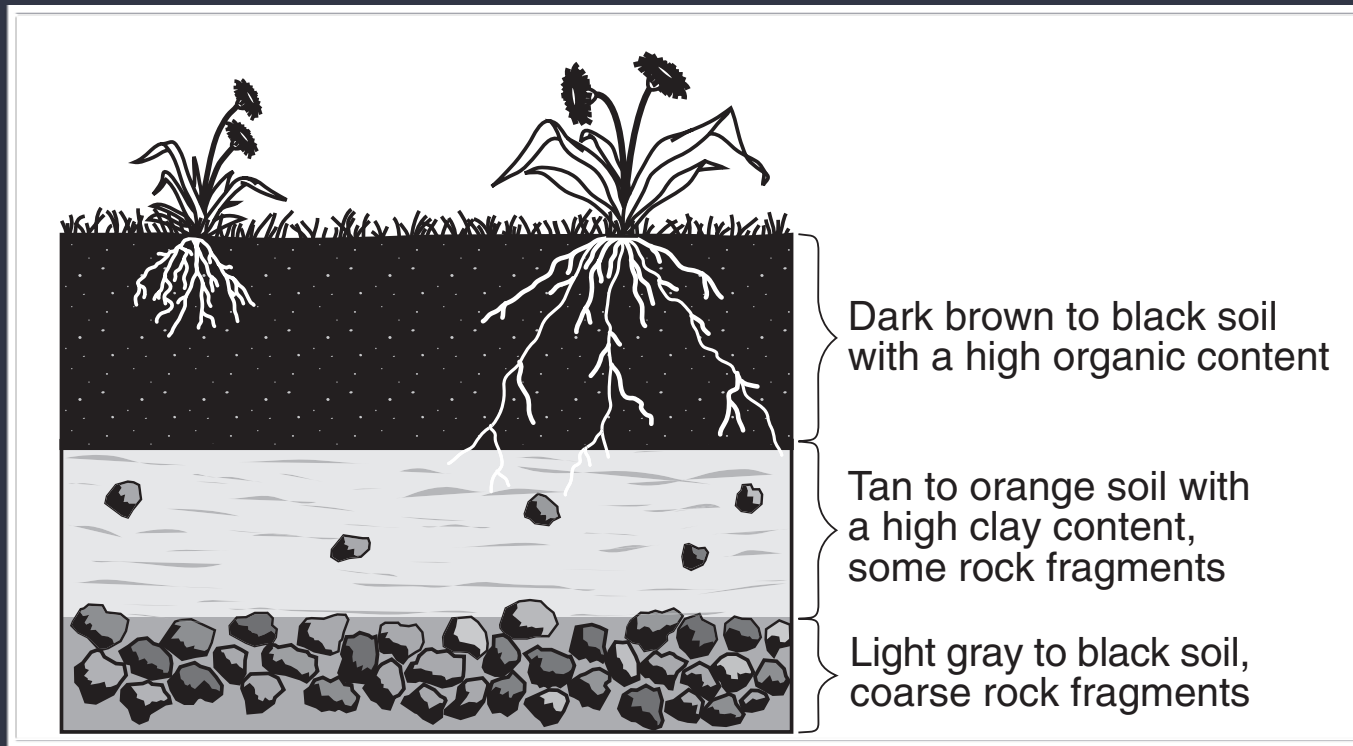
BACK

#60

NEXT

ANSWER:

Abrasion (water or wind)



What is the top layer of soil called?
What is soil made of?

BACK

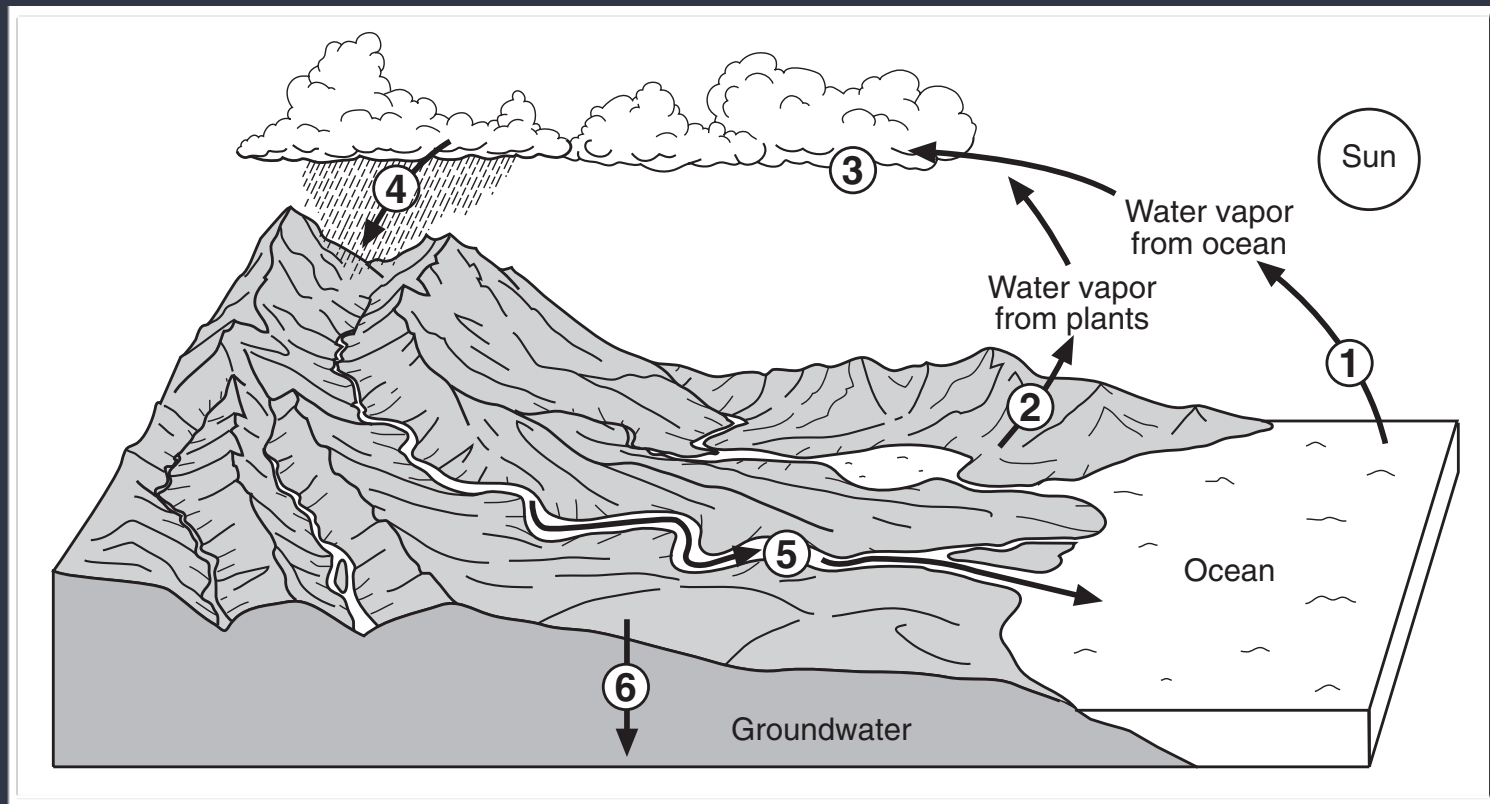
#61

NEXT

ANSWER:

Humus

Weathered rock and organic remains



Label the water cycle

ANSWER:

1. Evaporation
2. Transpiration
3. Condensation
4. Precipitation
5. Runoff
6. Infiltration

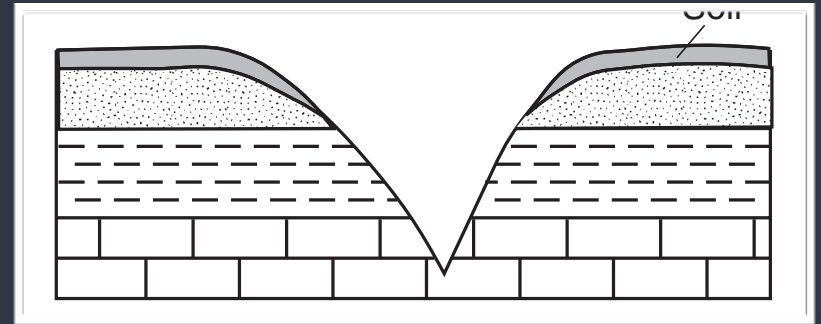
BACK

#63

NEXT



A



B

What made the 2 types of valley's?

BACK

#63

NEXT

ANSWER:

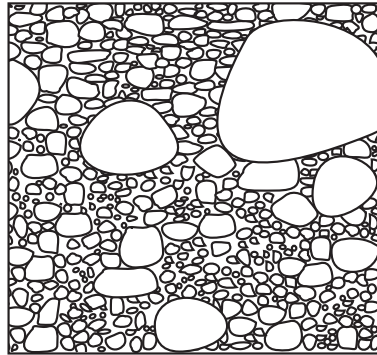
- A. Glacier
- B. River

BACK

#64

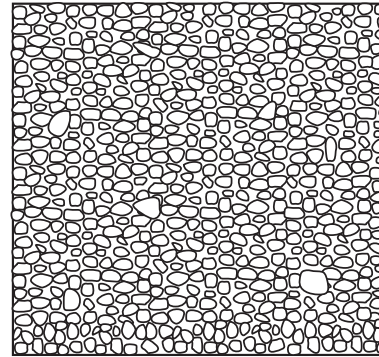
NEXT

Sample Y



Unsorted particle-
size range:
0.01–62 cm

Sample Z



Sorted particle-
size range:
0.1–0.3 cm

What deposited these samples?

BACK

#64

NEXT

ANSWER:

Y. Glacier (unsorted)
Z. River (sorted)

Air-Pressure Readings

Day	City A Air Pressure (mb)	City B Air Pressure (mb)
1	1004.0	1004.0
2	1000.1	1002.9
3	1000.2	1011.1
4	1010.4	1012.3

What day has the strongest winds?

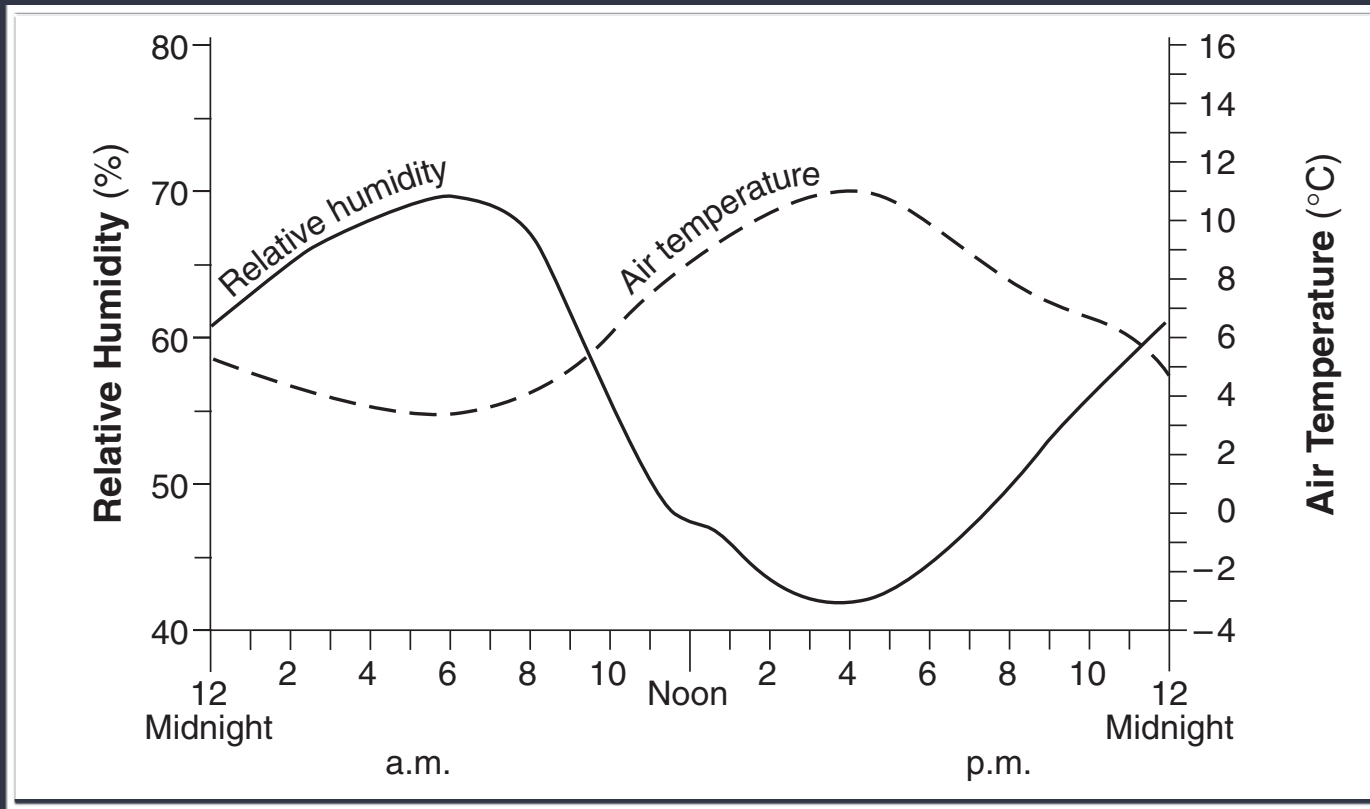
BACK

#65

NEXT

ANSWER:

Day 3 (biggest difference in pressure)



What time of day was humidity the highest?
What time of day was the driest?

BACK

#66

NEXT

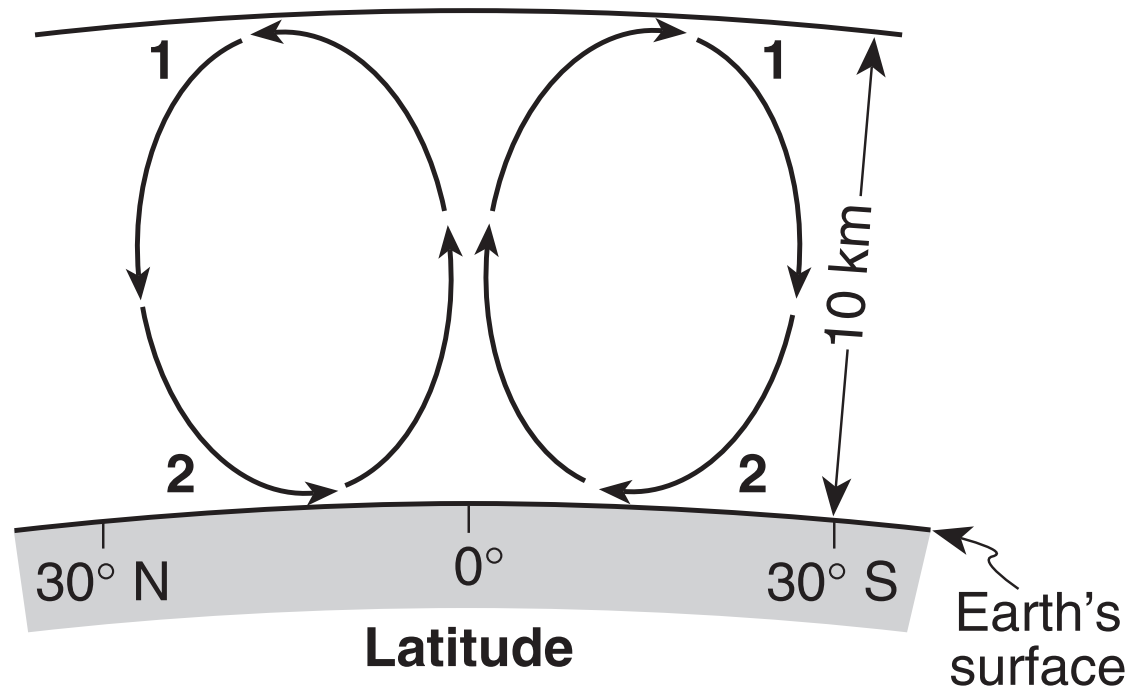
ANSWER:

6am and 4pm

BACK

#67

NEXT



What is the name of this circulation?

BACK

#67

NEXT

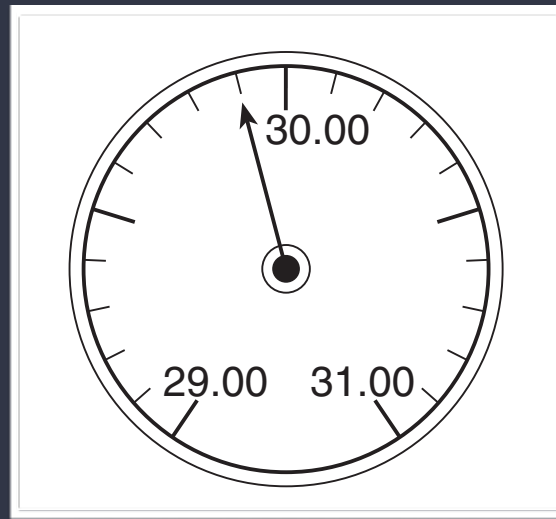
ANSWER:

Convection

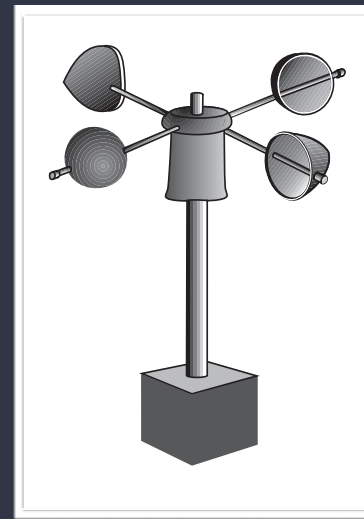
BACK

#68

NEXT



A



B

What are these instruments called and what do they measure?

BACK

#68

NEXT

ANSWER:

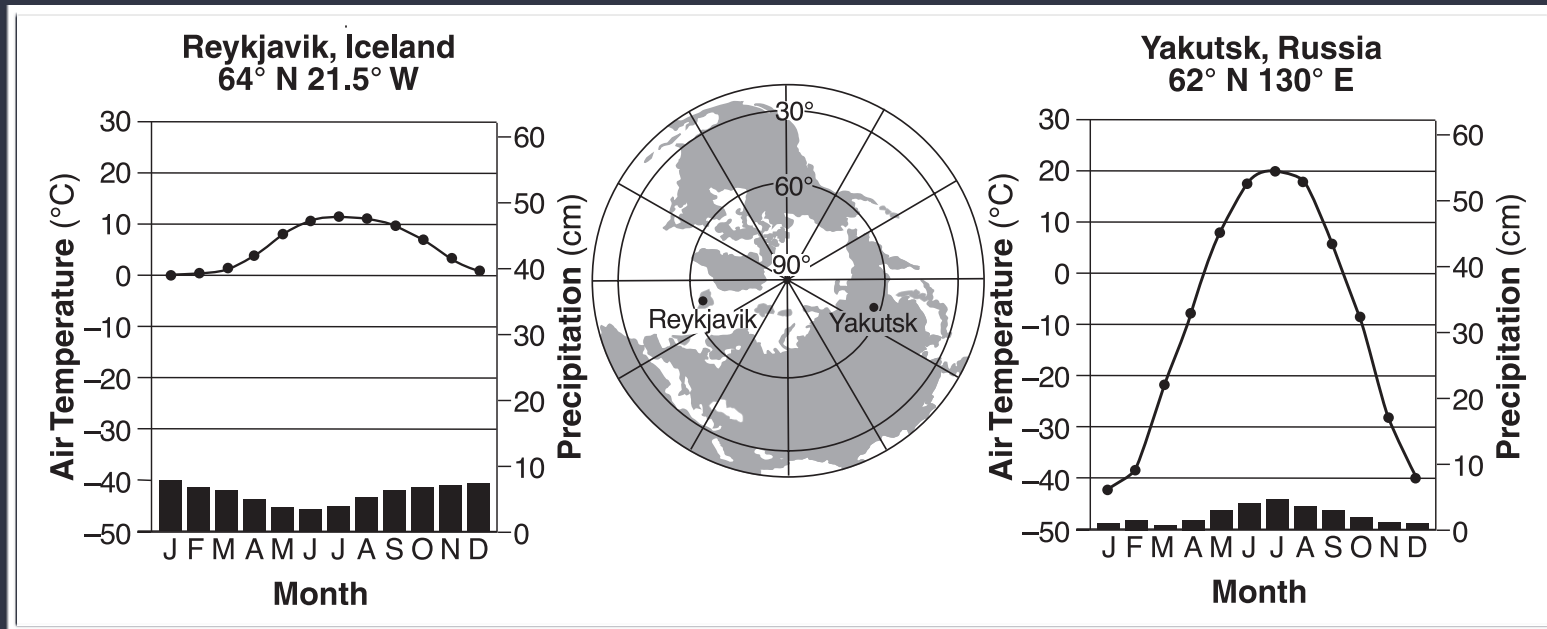
A: Barometer-measures pressure

B: Anemometer-measures wind speed

BACK

#69

NEXT



Which city is coastal and which is inland?

BACK

#69

NEXT

ANSWER:

Iceland is coastal
Russia is inland

BACK

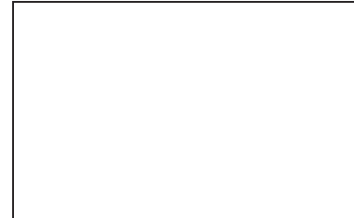
#70

NEXT

Warm air rises.



The air expands
due to
lower pressure.



Condensation
occurs and a
cloud forms.

Whats missing?

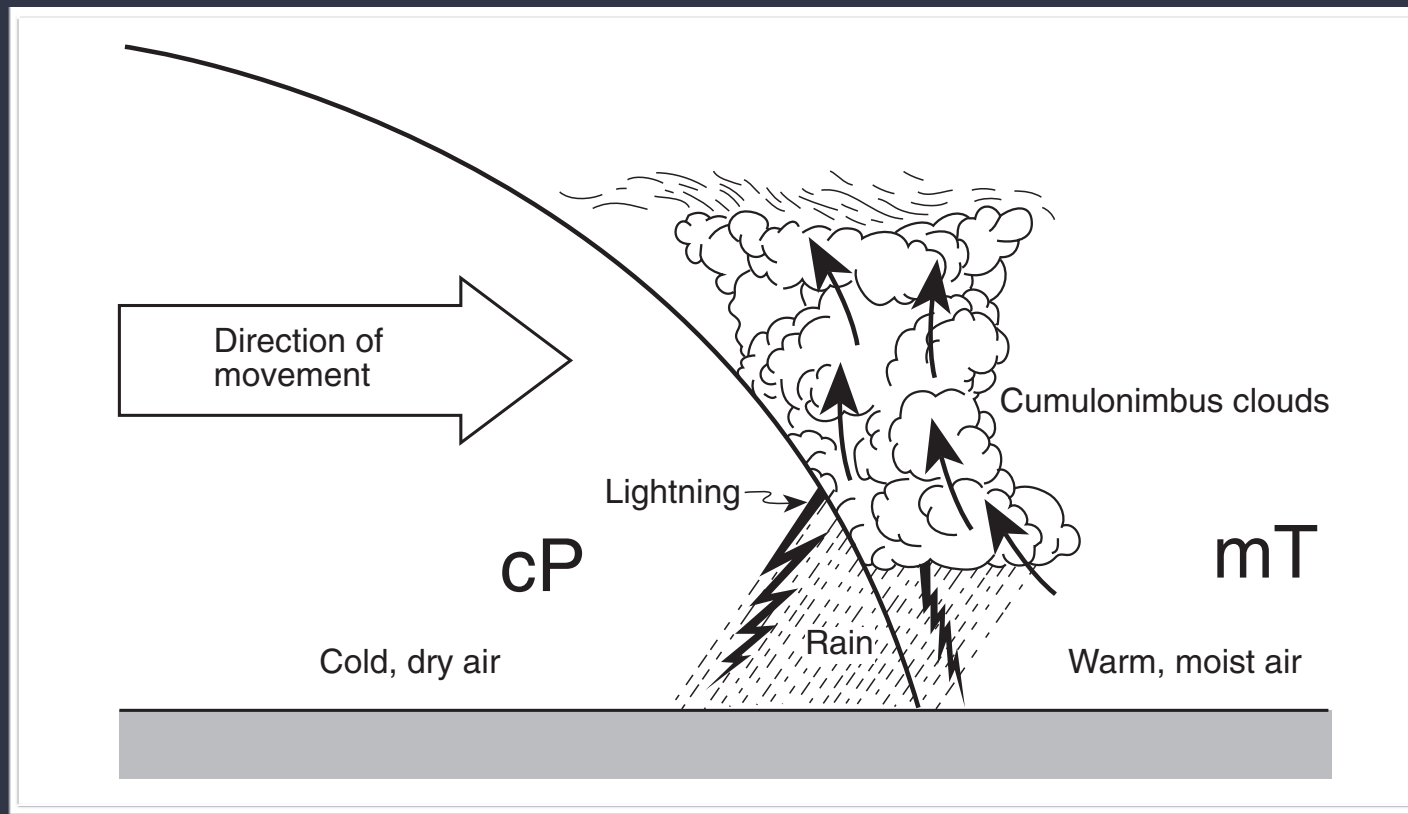
BACK

#70

NEXT

ANSWER:

Air cools to the dew point



What type of front is this?

BACK

#71

NEXT

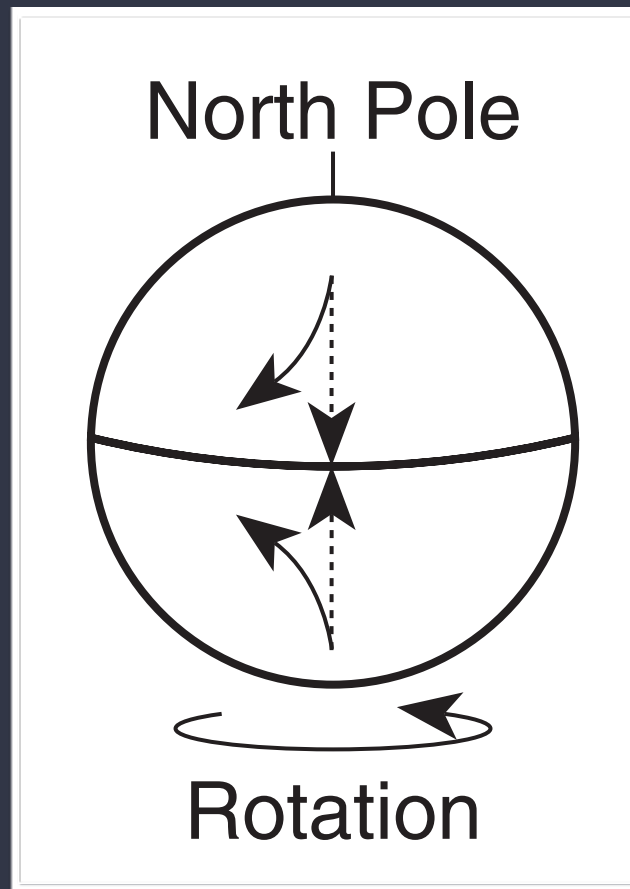
ANSWER:

Cold Front

BACK

#72

NEXT



The curvature of winds caused by Earth's rotation is called....

BACK

#72

NEXT

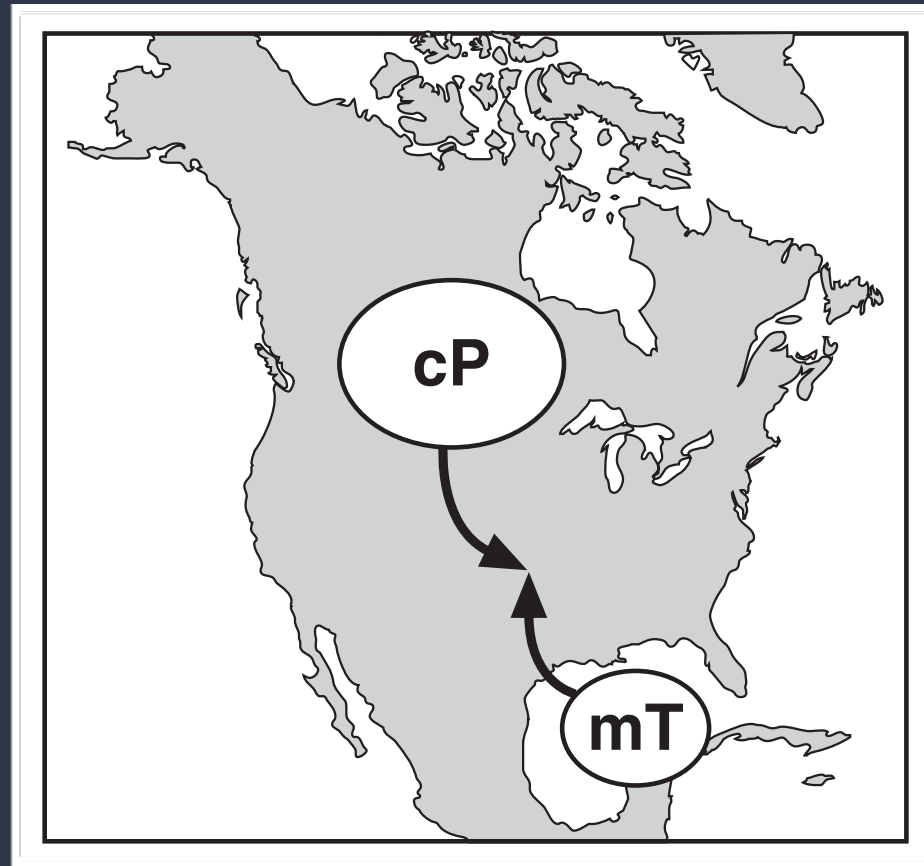
ANSWER:

The Coriolis Effect

BACK

#73

NEXT



What do the 2 air masses stand for?

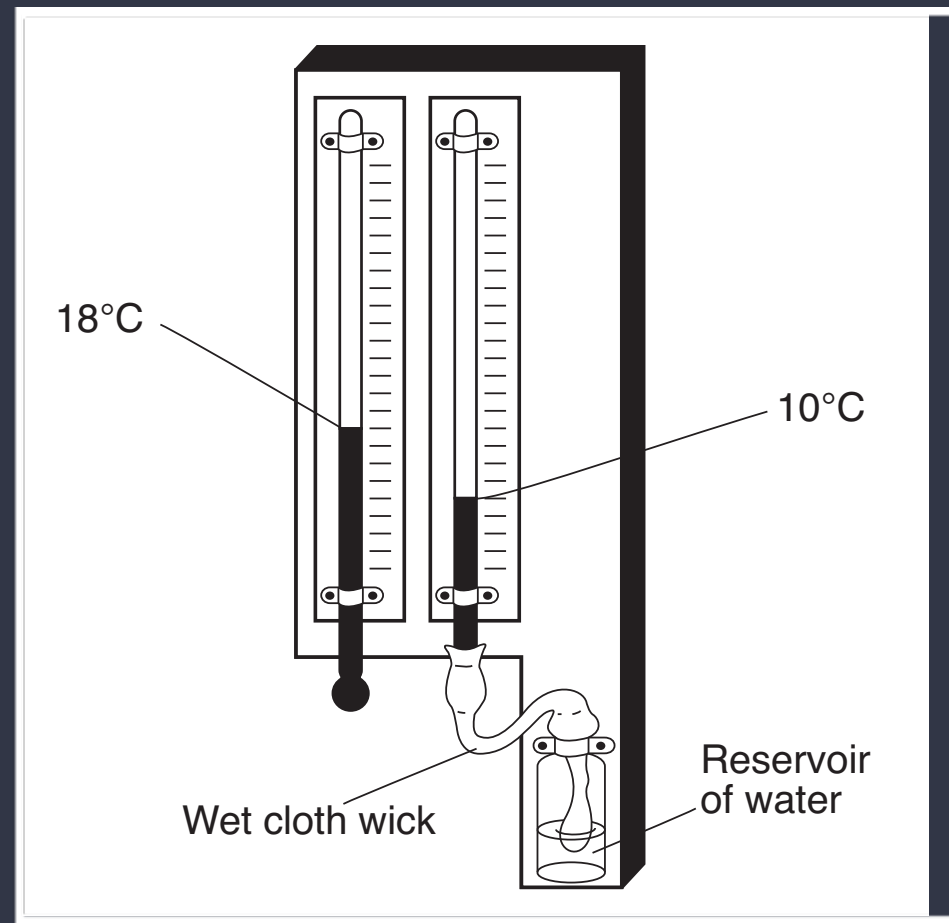
BACK

#73

NEXT

ANSWER:

cP is continental polar
mT is maritime tropical



Calculate the dew point and relative humidity

BACK

#74

NEXT

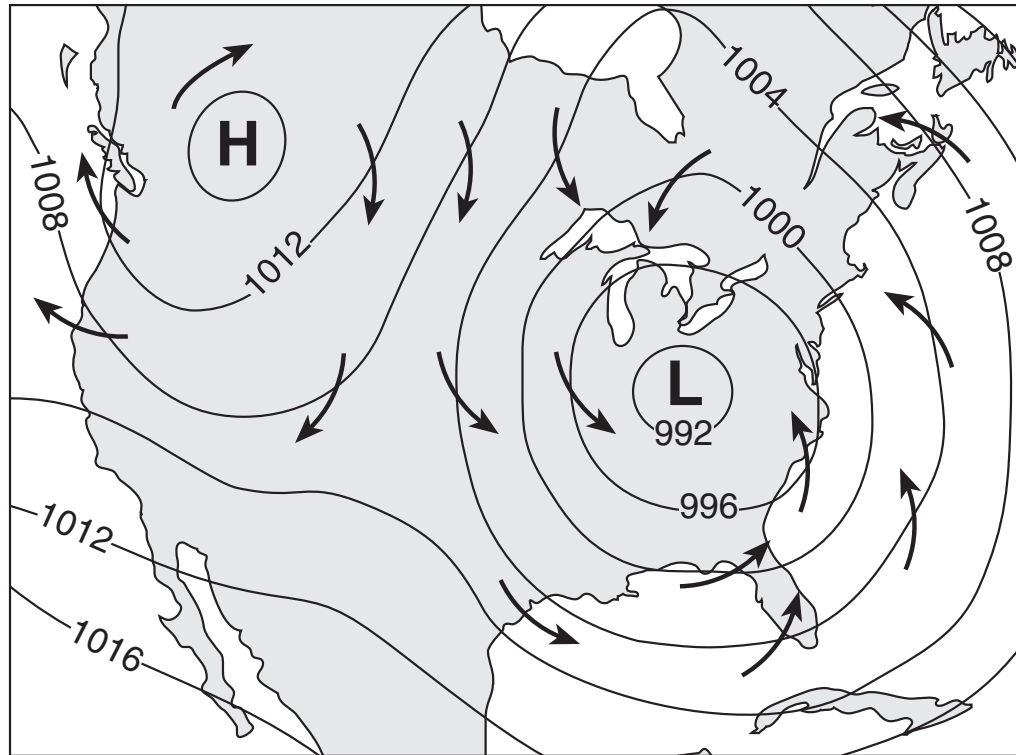
ANSWER:

Dewpoint = 2°C
Relative Humidity = 33%

BACK

#75

NEXT



Express how winds blow around H and L pressure

BACK

#75

NEXT

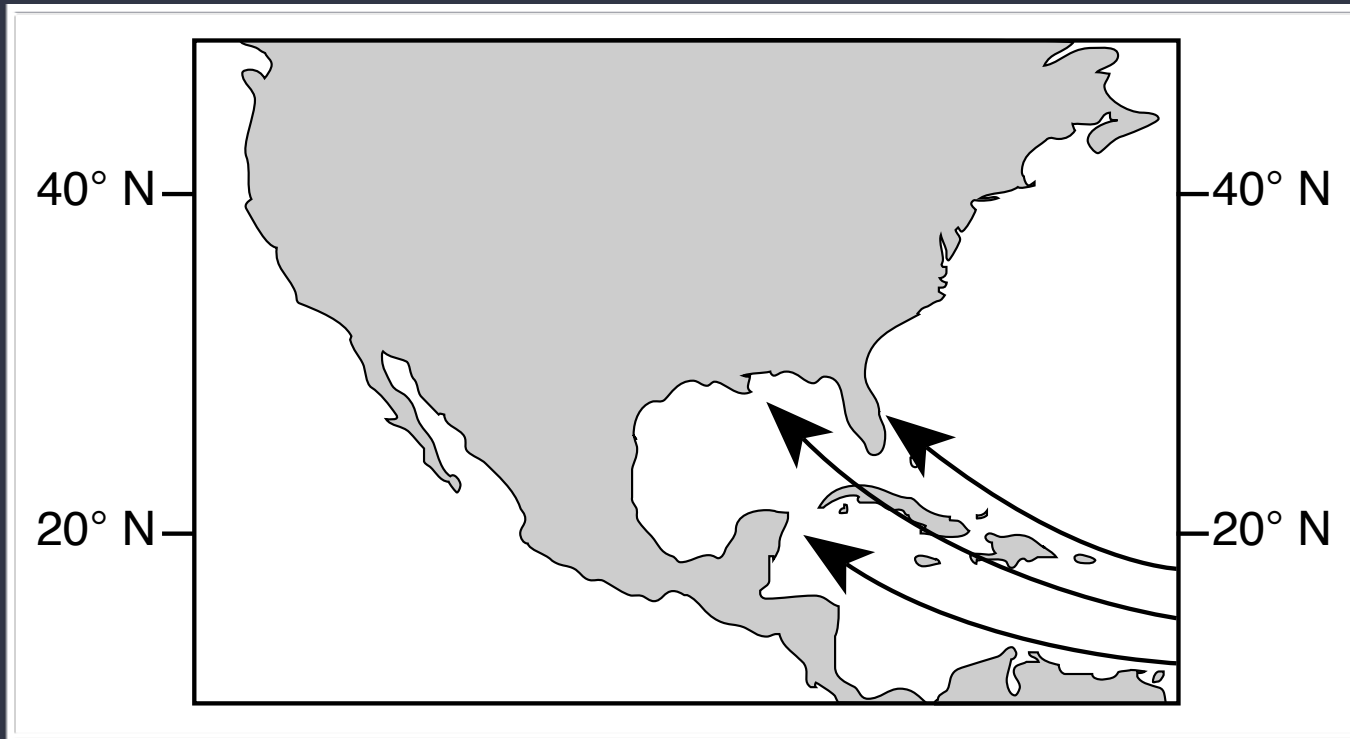
ANSWER:

High pressure is clockwise and outward
Low pressure is inward and counterclockwise

BACK

#76

NEXT



What is this a map of?

BACK

#76

NEXT

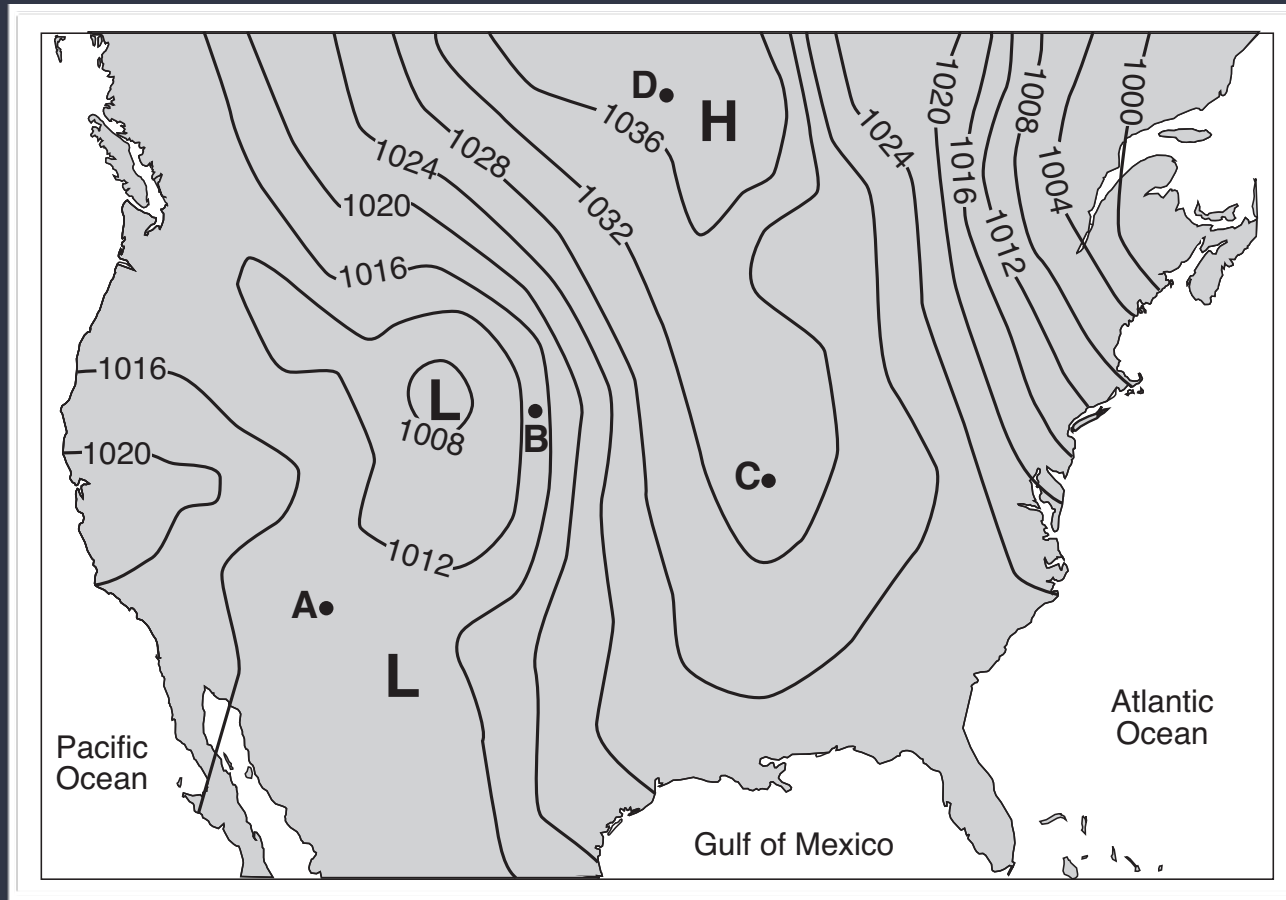
ANSWER:

Path of an atlantic hurricane

BACK

#77

NEXT



Around what point are the strongest winds?

BACK

#77

NEXT

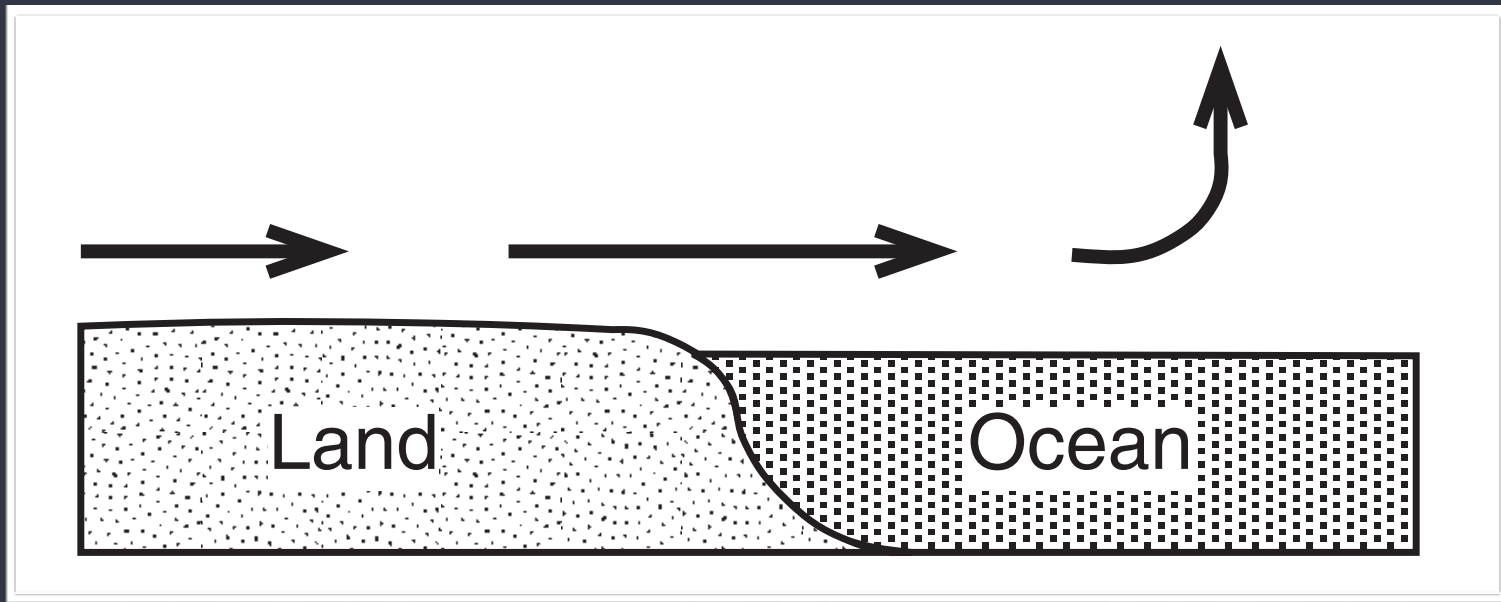
ANSWER:

B

BACK

#78

NEXT



Is this a land or sea breeze?

BACK

#78

NEXT

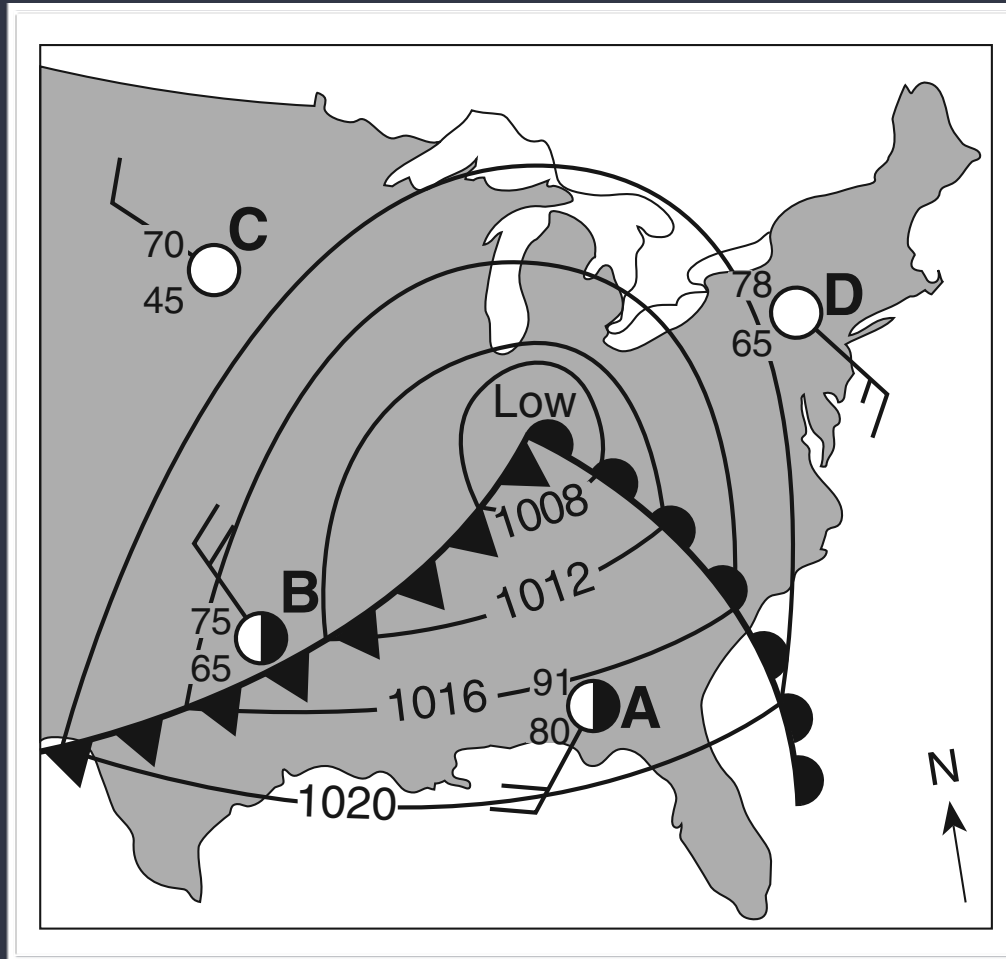
ANSWER:

Land breeze

BACK

#79

NEXT



What city just experienced a thunderstorm?
What city has the coolest temps?

BACK

#79

NEXT

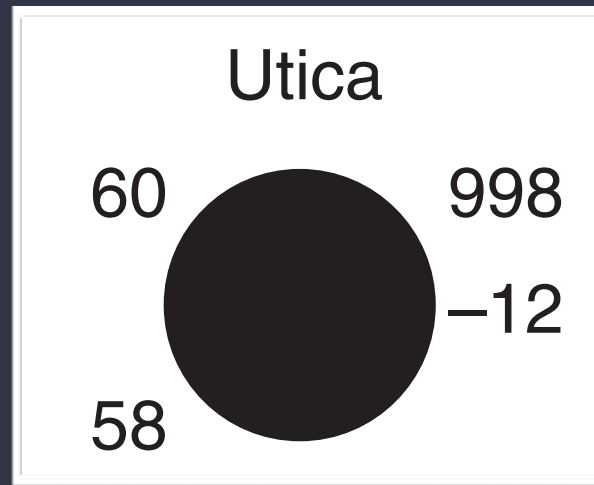
ANSWER:

B has had a thunderstorm
C has the coolest temps

BACK

#80

NEXT



How can you tell that Utica has a good chance for rain?
What is the pressure?

BACK

#80

NEXT

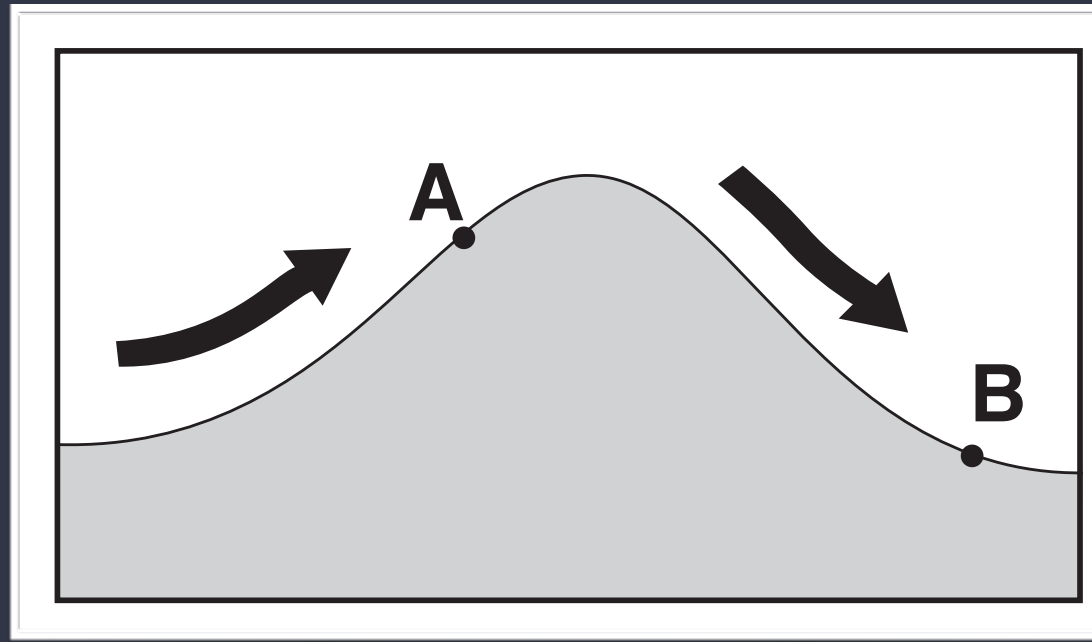
ANSWER:

Air temp and Dew point are close
999.8 mb

BACK

#81

NEXT



What location has expansional cooling and lots of precipitation?

BACK

#81

NEXT

ANSWER:

A: Windward side

Nice Job!

[HOME](#)