

Name: _____

Date: _____ Period: _____

Packet: Latitude and Longitude

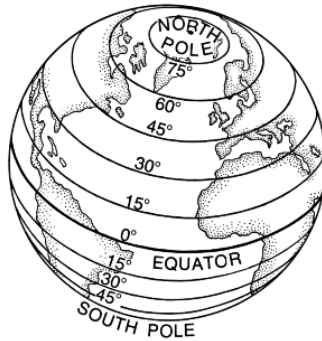
CLASS NOTES

- Map - _____

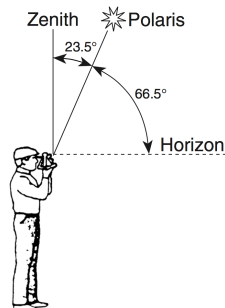
- Latitude - _____

 - Also called _____
 - These lines _____ intersect
- Equator - _____

 - The North Pole is _____ north latitude
 - The South Pole is _____ south latitude



- Finding your latitude
 - The altitude [angle] of Polaris is equal to your latitude

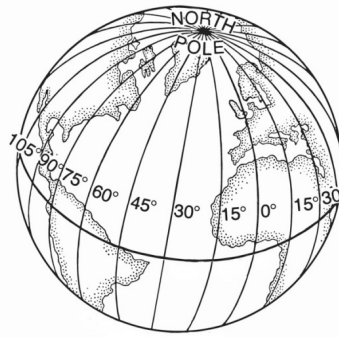


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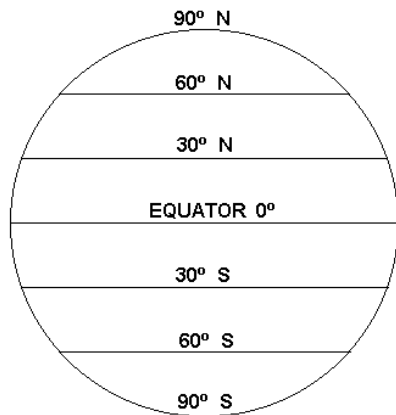
- Longitude - _____

- Also called _____
- Prime Meridian - _____

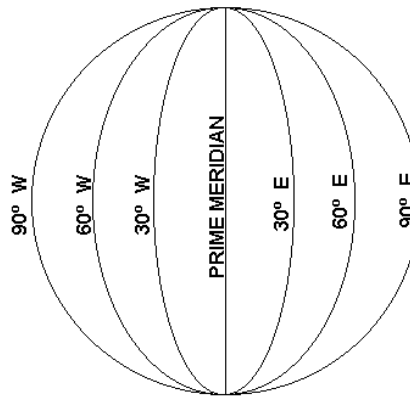
- The International Date Line is _____ east or west of the Prime Meridian



- Combine latitude and longitude to get a coordinate



Latitude



Longitude

- Be sure you include direction with both latitude and longitude

Example: 20° 30' _____ and 75° 30' _____

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- Subdivisions of Latitude and Longitude

One degree is divided into _____ [60']

One minute can be divided into _____ [60"]

- Time Zones

Earth's _____ is the basis for local time

The Earth rotates _____ in 24 hours

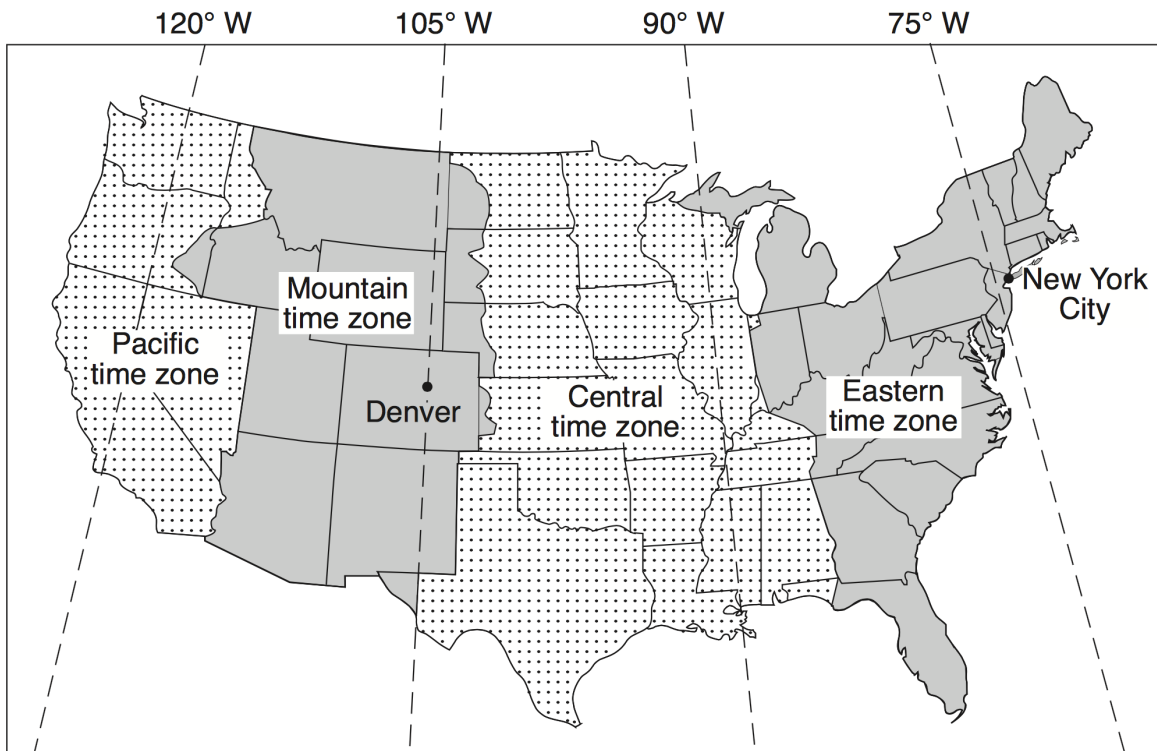
Earth rotates on an imaginary axis at _____

Earth is divided into _____ [15°] time zones

Each time zone is _____ hour different

Each time zone covers _____ of longitude

There are _____ time zones in the United States



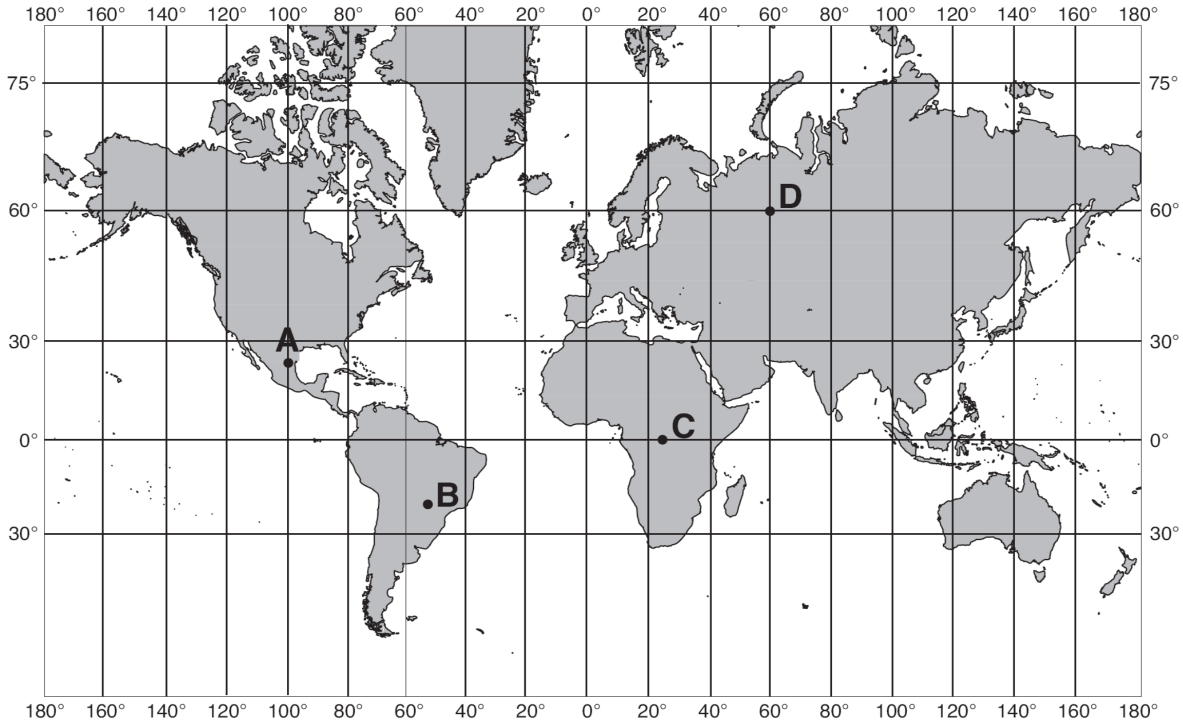
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PART I QUESTIONS: MULTIPLE CHOICE

1. The angle of the star Polaris above the northern horizon can be used to determine an observer's
 - a. solar time
 - b. latitude
 - c. longitude
 - d. local time
2. How are latitude and longitude lines drawn on a globe of the Earth?
 - a. Longitude lines are parallel and latitude lines meet at the Equator
 - b. Latitude lines are parallel and longitude lines meet at the Equator
 - c. Latitude lines are parallel and longitude lines meet at the poles
 - d. Longitude lines are parallel and latitude lines meet at the poles.
3. The approximate latitude of Utica, New York, is
 - a. $43^{\circ}05'$ N
 - b. $43^{\circ}05'$ S
 - c. $75^{\circ}15'$ E
 - d. $75^{\circ}15'$ W
4. To an observer on a ship at sea, which latitude does the North Star appear closest to the horizon?
 - a. 5° N
 - b. 50° N
 - c. 20° N
 - d. 85° N
5. At which New York State location is the altitude of *Polaris* closest to 42° ?
 - a. Albany
 - b. Rochester
 - c. Mt. Marcy
 - d. Slide Mt.
6. Which New York State city is located at $42^{\circ}39'$ N $73^{\circ}45'$ W?
 - a. Albany
 - b. Ithaca
 - c. Plattsburgh
 - d. Buffalo
7. What is the approximate location of Watertown, NY?
 - a. 44° N, 76° E
 - b. 44° S, 76° E
 - c. 44° N, 76° W
 - d. 44° S, 76° W
8. As a person travels due west across New York State, the altitude of Polaris will
 - a. increase
 - b. decrease
 - c. remain the same

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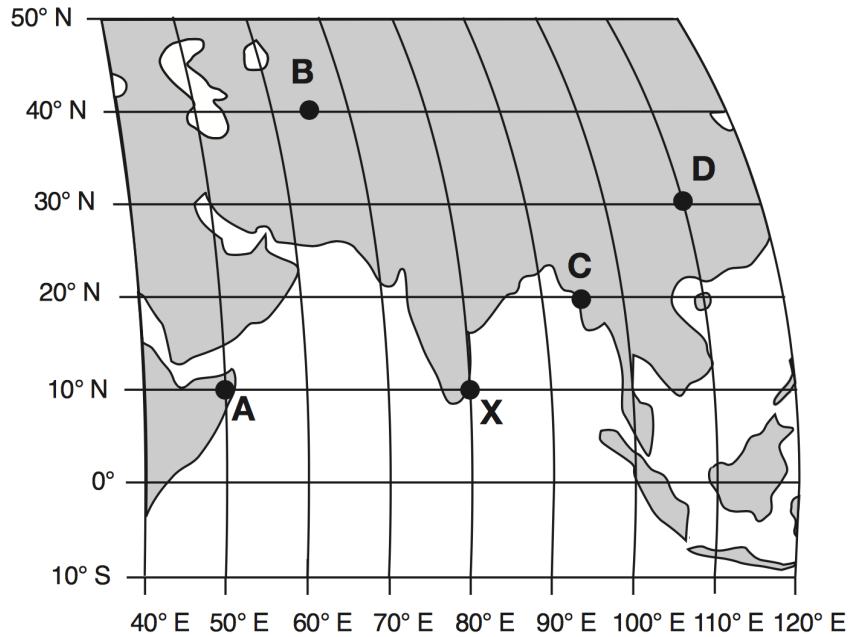
Base your answer to questions 1 through 3 on the world map below and your knowledge of Earth Science. Letters A through D represent locations on Earth's surface.



9. What is the latitude and longitude of point D?
- 60° N and 60° W
 - 60° S and 60° W
 - 60° N and 60° E
 - 60° S and 60° E
10. What is the latitude and longitude of point A?
- 32° N and 100° W
 - 32° S and 100° E
 - 28° N and 100° W
 - 28° S and 100° E
11. At which location will the altitude of the star Polaris be 0°?
- A
 - B
 - C
 - D

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Base your answer to questions 4 through 6 on the world map below that shows a portion of Earth's system of latitude and longitude and five surface locations labeled A, B, C, D, and X.



12. As which location will an observer see the greatest altitude of Polaris?
- A
 - B
 - C
 - D
13. The approximate latitude and longitude of location D?
- 30° N and 110° W
 - 30° S and 110° E
 - 30° N and 110° E
 - 30° S and 110° W
14. It is solar noon at location X, what time is it at location C?
- 10:00 am
 - 11:00 am
 - 1:00 pm
 - 2:00 pm
15. It is solar noon at location X, what time is it at location B?
- 10:00 am
 - 11:00 am
 - 1:00 pm
 - 2:00 pm