

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

Date: \_\_\_\_\_ Period: \_\_\_\_\_

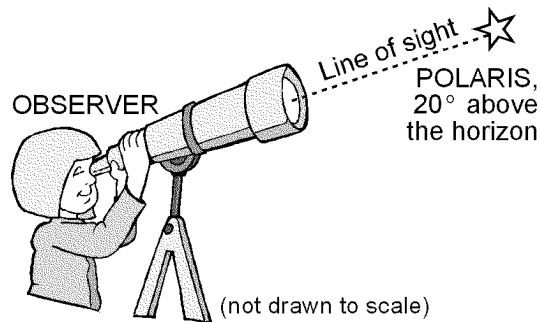
Measuring the Earth

Earth Science

# Measuring the Earth

## Practice Exam

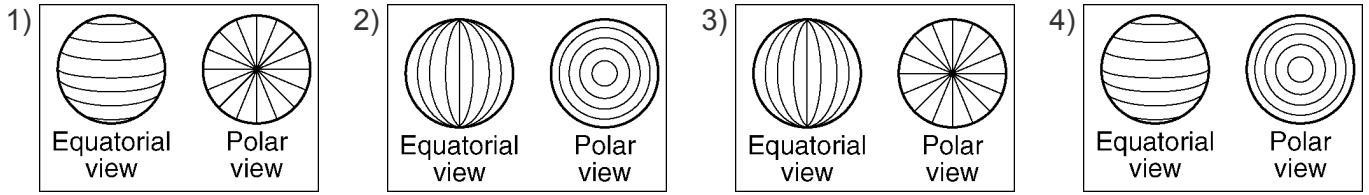
- 1) How are latitude and longitude lines drawn on a globe of the Earth?
  - 1) Latitude lines are parallel and longitude lines meet at the Equator.
  - 2) Longitude lines are parallel and latitude lines meet at the poles.
  - 3) Latitude lines are parallel and longitude lines meet at the poles.
  - 4) Longitude lines are parallel and latitude lines meet at the Equator.
  
- 2) As a person travels due west across New York State, the altitude of *Polaris* will
  - 3) decrease
  - 2) increase
  - 1) remain the same
  
- 3) To an observer on a ship at sea, at which latitude does the North Star appear *closest* to the horizon?
  - 1) 20° N
  - 2) 50° N
  - 3) 5° N
  - 4) 85° N
  
- 4) The two elements that make up the *largest* percentage by mass of Earth's crust are oxygen and
  - 1) hydrogen
  - 2) silicon
  - 3) nitrogen
  - 4) potassium
  
- 5) The diagram below shows an observer measuring the altitude of *Polaris*.



What is the latitude of the observer?

- 1) 20° N
  - 2) 20° S
  - 3) 70° N
  - 4) 70° S
- 
- 6) According to the *Earth Science Reference Tables*, at which New York State location is the altitude of *Polaris* *closest* to 42°?
    - 1) Rochester
    - 2) Mt. Marcy
    - 3) Albany
    - 4) Slide Mt.
  
  - 7) New York State's highest peak, Mt. Marcy is located at approximately
    - 1) 74°05'N 44°05'W
    - 2) 73°55'N 44°10'W
    - 3) 44°05'N 73°55'W
    - 4) 44°10'N 74°05'W
  
  - 8) Oxygen is the *most* abundant element by volume in Earth's
    - 1) crust
    - 2) hydrosphere
    - 3) troposphere
    - 4) inner core

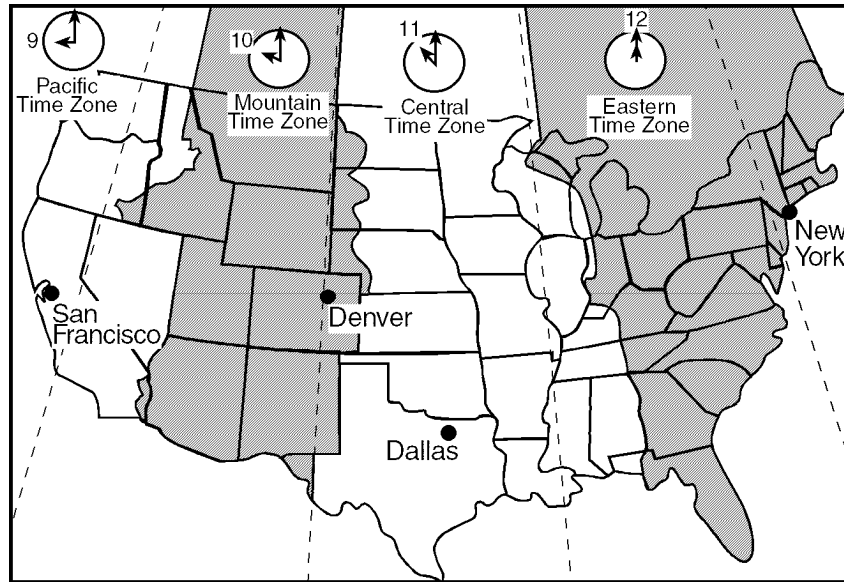
9) The lines on which set of views *best* represent Earth's latitude system?



10) At which New York State location would an observer measure the *highest* altitude of *Polaris*?

- 1) New York City      2) Niagara Falls      3) Slide Mountain      4) Plattsburgh

Questions 11 and 12 refer to the following:



11) The dashed boundaries between time zones are how many degrees of longitude apart?

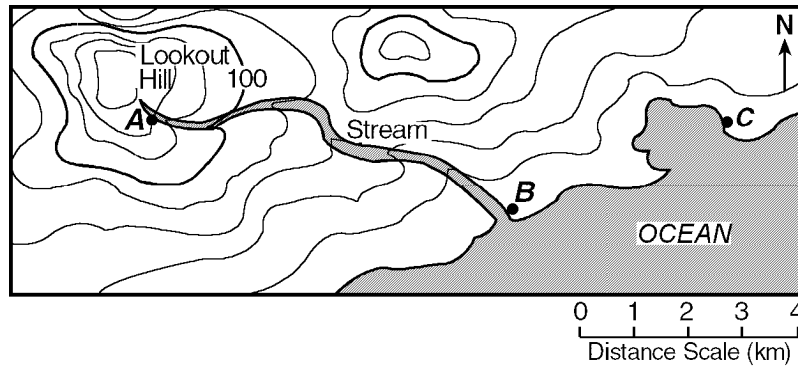
- 1) 10°      2) 15°      3) 23½°      4) 24°

12) What is the time in San Francisco when it is 6 a.m. in Dallas?

- 1) 3 a.m.      2) 4 a.m.      3) 5 a.m.      4) 7 a.m.

**Questions 13 through 15 refer to the following:**

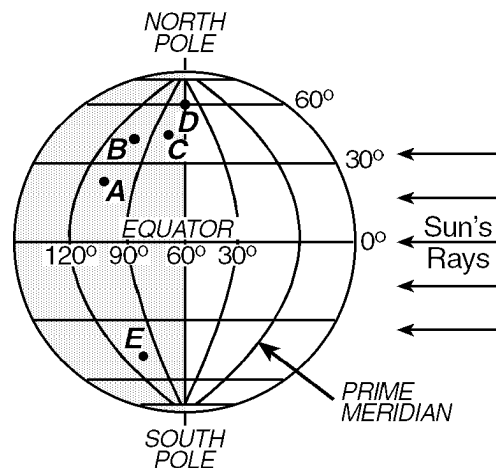
Points A through C are locations on the contour map below. Elevations are in meters.



- 13) The elevation at point A is
- 1) 60 m                      2) 140 m                      3) 300 m                      4) 100 m
- 14) In which direction is the stream flowing?
- 1) southwest                      2) northeast                      3) northwest                      4) southeast
- 15) Which side of Lookout Hill has the *steepest* slope?
- 1) east                      2) north                      3) west                      4) south

**Questions 16 through 18 refer to the following:**

The diagram below represents the Earth. Some of the latitude and longitude lines have been labeled. Points A through E represent locations on the Earth's surface.

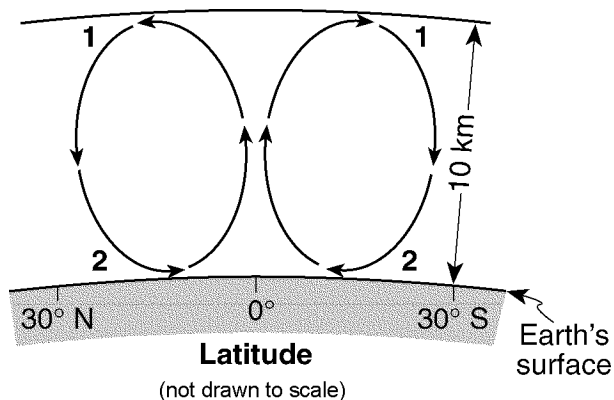


- 16) What are the approximate latitude and longitude of location A?
- 1) 105°S, 25°E                      2) 25°N, 105°E                      3) 25°N, 105°W                      4) 105°N, 25°W
- 17) The latitude and longitude of which location are *closest* to those of New York State?
- 1) A                      2) B                      3) C                      4) D

- 18) As a traveler goes from location *A* to location *B*, the altitude of *Polaris* will
- 3) remain the same
  - 2) decrease
  - 1) increase

**Questions 19 and 20 refer to the following:**

The cross section below shows the general movement of air within a portion of Earth's atmosphere located between 30° N and 30° S latitude. Numbers 1 and 2 represent different locations in the atmosphere.



- 19) Which temperature zone layer of Earth's atmosphere is shown in the given cross section?
- 1) stratosphere
  - 2) troposphere
  - 3) mesosphere
  - 4) thermosphere
- 20) What is the approximate percentage by volume of oxygen present in Earth's atmosphere at location 2 in the given diagram?
- 1) 21%
  - 2) 33%
  - 3) 46%
  - 4) 10%