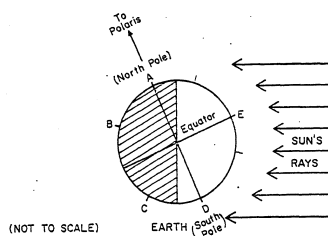


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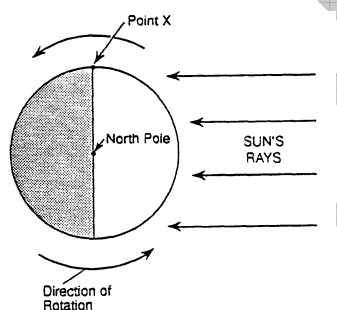
Earth Motions Practice Worksheet #2

- The extra day in leap year is an attempt to adjust the calendar to the period of time required for the
 - Earth's revolution
 - Moon's revolution
 - Sun's revolution
 - Sun's rotation

- During which month is the Earth in the position shown in the diagram?
 - March
 - September
 - June
 - December



- The diagram below shows the rotating Earth as it would appear from a satellite over the North Pole. The time at point X is closest to
 - 6 am.
 - 12 noon
 - 6 p.m.
 - 12 midnight

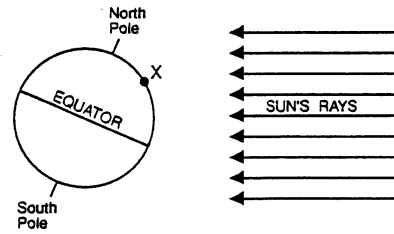


- A Foucault pendulum is set in motion in New York State in a geographic north-south direction. Which observation will be made after a period of several hours?
 - The pendulum appears to swing in a wide circle.
 - The length of the pendulum's swing appears to increase gradually.
 - The direction of the pendulum's swing appears to change in a predictable manner.
 - The direction of the pendulum's swing appears to change in an unpredictable manner.
- What is the total number of degrees that the Earth rotates on its axis during a 12-hour period?
 - 1°
 - 15°
 - 180°
 - 360°
- On March 21, two observers, one at 45° north latitude and the other at 45° south latitude, watch the "rising" Sun. In which direction(s) must they look?
 - Both observers must look westward.
 - Both observers must look eastward.
 - The observer at 45° N. must look westward while the other must look eastward.
 - The observer at 45° S. must look westward while the other must look eastward.
- A photograph showing circular star trails is evidence that the Earth
 - rotates on its axis
 - has a nearly circular orbit
 - revolves around the Sun
 - has a nearly spherical shape
- Which is the best evidence for the Earth's rotation?
 - the rising of the Sun
 - the phases of the Moon
 - the changing of the seasons
 - the Coriolis Effect

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9. The diagram below shows a view of the Earth in space with respect to the Sun's rays. Point X is a location on the Earth's surface. Which event would occur at point X on the date represented in the diagram?

- 1 the beginning of the winter season
- 2 the formation of the longest noontime shadows for the year
- 3 the lowest noontime altitude of the Sun for the year
- 4 the greatest daylight hours for the year



10. For what reason did the heliocentric model of the Universe replace the geocentric model of the Universe?

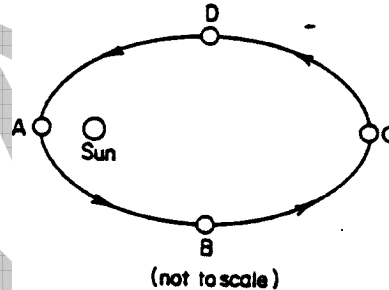
- 1 The geocentric model no longer predicted the positions of the constellations.
- 2 The geocentric model did not predict the phases of the Moon.
- 3 The heliocentric model provided a simpler explanation of the motions of the planets.
- 4 The heliocentric model proved that the Earth rotates.

Questions 11-13

The diagram to the right shows the Earth's orbit around the Sun.

11. At which location is Earth at perihelion?

- 1 A
- 2 B
- 3 C
- 4 D



12. The rate at which the Earth would travel to get from point A to point B is

- | | |
|-----------------|------------------|
| 1 1 degree/hr | 3 1 degree/day |
| 2 15 degrees/hr | 4 360 degrees/hr |

13. Which position would represent Earth on June 21st?

- | | |
|-----|-----|
| 1 A | 3 C |
| 2 B | 4 D |

14. Some constellations (star patterns) observed in the summer skies in New York State are different from those observed in the winter skies. The best explanation for this observation is that

- 1 the Earth revolves around the Sun
- 2 the Earth rotates on its axis
- 3 constellations are moving away from the Earth
- 4 constellations revolve around the Earth

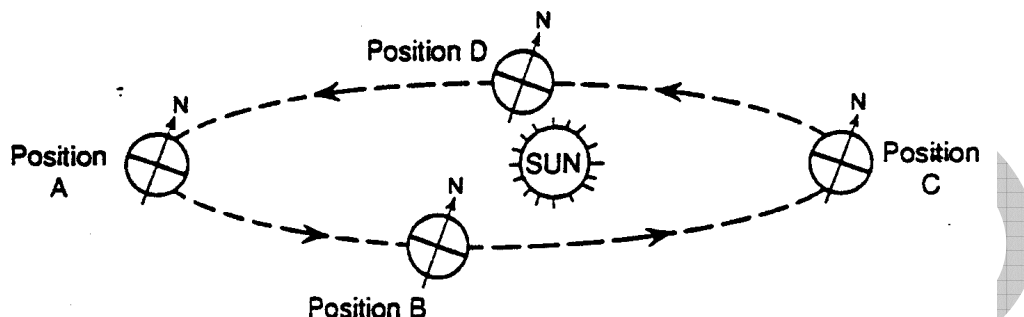
15. Planet X is similar in all respects to the Earth except that it does not rotate on its axis. A Foucault pendulum is allowed to swing freely on planet X. After 6 hours of swinging, the path of the pendulum's swing, as seen by an observer on planet X, will be

- 1 the same as the original path
- 2 90° to the right of the original path
- 3 90° to the left of the original path
- 4 180° to the right of the original path

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Use the diagram below for **questions 16-18**.

The diagram represents four positions of the Earth as it revolves around the Sun.



(NOT DRAWN TO SCALE)

16. At which position is the Earth located on June 21?

1 A	3 C
2 B	4 D

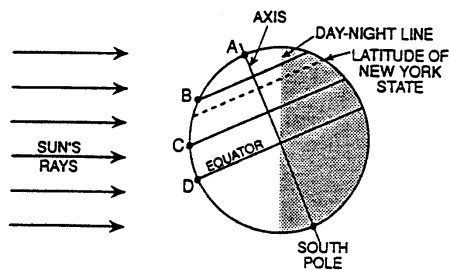
17. Which statement is true of the Earth in the diagram?
 - 1 At position B the Earth is at perihelion.
 - 2 At position C the Earth is at aphelion.
 - 3 At position A the Earth is at aphelion.
 - 4 At position A the Earth is at perihelion.

18. Which two positions in the diagram represent the equinoxes?

1 A and B	3 B and C
2 A and C	4 B and D

19. The total number of hours of daylight received by the South Pole on the date represented in the diagram is closest to

1 0 hr	3 18 hr
2 9 hr	4 24 hr



20. In New York State, the number of hours of daylight each day decreases continuously from

1 March 1 to May 1	3 June 1 to August 1
2 September 1 to November 1	4 December 1 to February 1