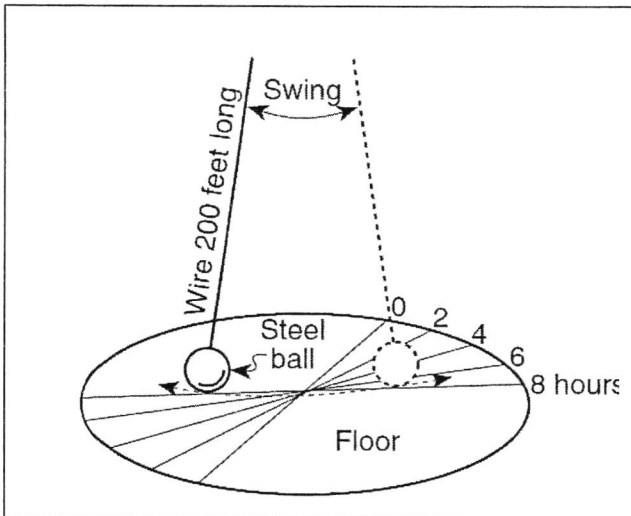


FOUCAULT'S PENDULUM & CORIOLIS EFFECT*

1. The diagram below represents a Foucault pendulum swinging freely for 8 hours.

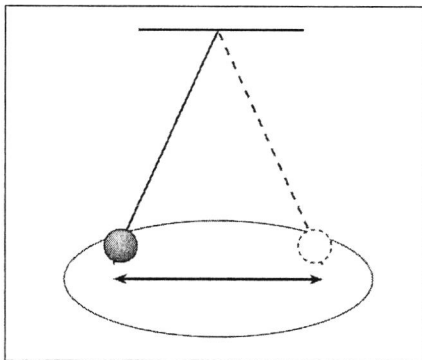


HINT: Which Earth motion did Foucault's Pendulum prove?

The Foucault pendulum appears to gradually change its direction of swing due to Earth's

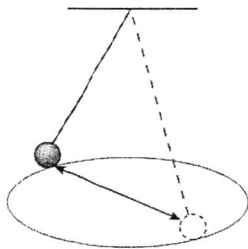
- (1) orbit around the Sun
- (2) tilted axis
- (3) curved surface
- (4) spin on its axis

2. The diagram below represents a **Foucault pendulum** that is swinging back and forth.



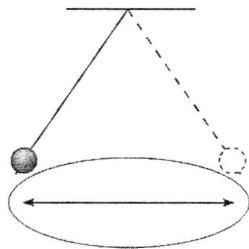
HINT: The Foucault Pendulum continued to swing but its direction of swing changed.

Which diagram best represents the **change in the motion** of a Foucault pendulum that provides **evidence of Earth's rotation**?



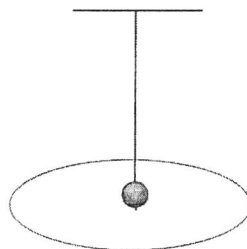
Different direction of swing

(1)



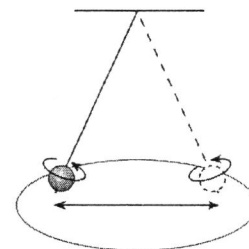
Longer length of swing

(2)



Swinging stops

(3)

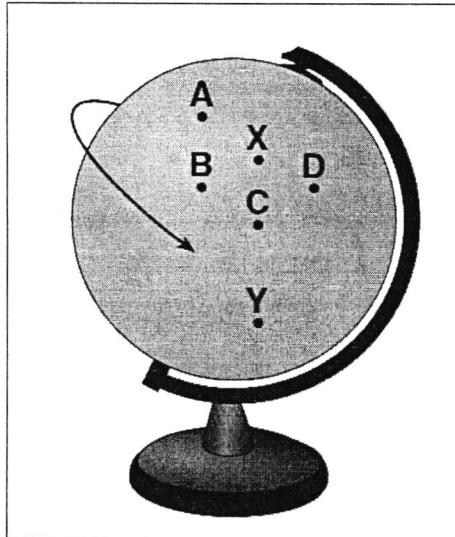


Begins to spin

(4)

FOUCAULT'S PENDULUM & CORIOLIS EFFECT*

3. The diagram below represents a globe that is spinning to represent Earth rotating. The globe is spinning in the direction indicated by the arrow. Points **A, B, C, D, X, and Y** are locations on the globe.

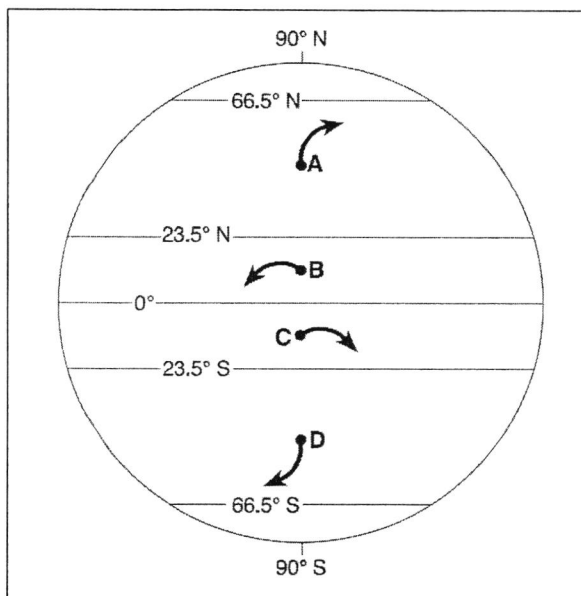


- In the **Northern Hemisphere**, moving objects will be deflected (curve) to their RIGHT
- In the **Southern Hemisphere**, moving objects will be deflected (curve) to their LEFT

A student attempted to draw a straight line from point X to point Y on the spinning globe. Due to the Coriolis effect, the student's drawn line most likely passed through point

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

4. The arrows in the diagram below show changes in the **direction of surface winds** at four lettered locations, A, B, C, and D, on Earth.



- In the **Northern Hemisphere**, moving objects will be deflected (curve) to their RIGHT
- In the **Southern Hemisphere**, moving objects will be deflected (curve) to their LEFT

The arrow at which location correctly shows a **deflection** of the wind that could be due to the Coriolis effect?

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