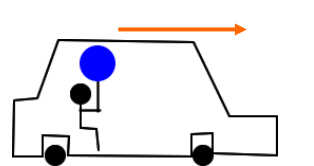


## Johnny is holding a Helium-filled balloon by its string

He is sitting in the back seat of a car. The car is initially stopped at a red light.

The light turns green and the car accelerates.



When the car begins accelerating Johnny sees the balloon:

- A. Stay stationary
- B. Move towards the back
- C. Move towards the front
- C. Don't know

2

## A Pendulum Bob, Stationary Relative to the Ground, is Suspended by A Long String in Toronto

Assume the Earth is a perfect sphere. The point P on the ground is on the line between the string's support point and the center of the Earth. The bob's position is:

- A. Right over point P
- B. Slightly North of point P
- C. Slightly South of point P
- D. Slightly East of point P
- E. Slightly West of point P

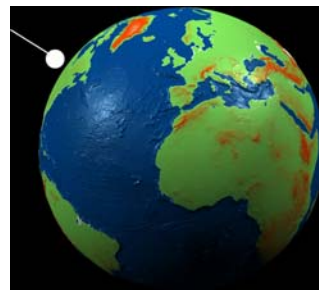


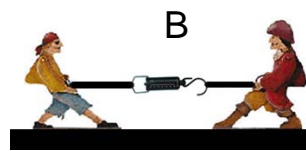
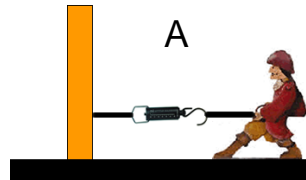
Figure not to scale!

2

## Stationary Pirates Pull on Ropes With a Constant Force

The ropes are connected to a stationary spring scale.

For which case does the scale read the greatest force?



A. Case A

B. Case B

C. The scale reads the same for both cases