

The Pirate Ship

Weight of empty Pirate	63,606 N	Max height during swing	
Radius of swing		Period of swing	

1. Are you more likely to be weightless when riding at the end of the Pirate Ship or in the middle of the Pirate Ship? Why?

2. Assume that the pivot bearing of the Pirate is nearly friction-free and calculate the maximum velocity of the Pirate Ship (when it is going full bore). Where does this maximum velocity occur?

3. Using the Pirate as a pendulum, estimate gravity for this park.

4. What is the relative percentage of error between your answer in #3 and the currently accepted value?

5. Using your answer from #1 and the accepted value for gravity, estimate the coefficient of friction for the Pirate Ship.