You Can Weigh Jupiter Worksheet

 Name:

 Section #:

This worksheet should be filled out as you work through the experiments. Your instructor will either collect it or ask you to upload it to Canvas. Please read the accompanying lab and instructions carefully. Show your calculations and write in complete sentences when appropriate.

Introductory Questions

1. When Jupiter and Earth are in opposition (as they are for data collection in this lab) how far away are they in AU? What about in meters?

2. Given this distance and the fact that the radius of Jupiter is 7×10^7 m, what is the *angular* size of Jupiter as seen from Earth, in arcseconds? (Hint 1: drawing a right triangle may help you recall which trigonometric relation to use) (Hint 2: be careful with units)

3. If an object has an angular size of 50" and is 10 AU away from us, what is the *physical* size of the object in AU? What about in meters?