

9. Is “zero g” or “weightlessness” really the absence of gravity for astronauts in orbit around the Earth? What is the actual cause of “weightlessness”?

10. How far away is the moon from the Earth’s center compared to how far an apple is from the Earth’s center?

11. How does the acceleration of a falling apple compare to the acceleration of the orbiting moon?

12. In one second, an apple should fall _____ feet, and in one second the moon should fall _____ feet divided by _____, or _____ of an inch.

13. Make a drawing to the right that shows the inertial path of the moon and the actual path of the moon. Indicate on the drawing Newton’s crucial measurement of “1/20th of an inch”.

14. Explain why Newton’s Law of Gravity is so important? What other ideas does it synthesize?

15. What happened to Isaac Newton in 1696?

16. Besides a series of scientific discoveries, what did Newton “give us”?