Questions Related to Acceleration of Gravity

1. **The term "kinematics" comes from the Greek language.
    How would this term be expressed in English?**
    - ☐ the study of how a film reel is turned at the cinema
    - ☐ the study of the motion of points and bodies in space
    - ☐ the study of everything outside of mathematics

2. **What does the term "freefall" refer to?**
    - ☐ fruit that has fallen off a tree and does not need to be paid for
    - ☐ a theft that has gone unnoticed thus far
    - ☐ the motion of an object where gravity is the only external force acting on it.

3. **What equations are relevant to the analysis of freefall?**
    - ☐ time-distance equation
    - ☐ rate-time equation
    - ☐ acceleration-time law

4. **What is the name of the unit in which acceleration is measured?**
    - ☐ m/s^2
    - ☐ joule
    - ☐ newton
    - ☐ m/s

5. **What is the freefall acceleration on Earth (standard acceleration) expressed in
    the unit referred to in question 4?**
    - ☐ 9.81
    - ☐ 1.89
    - ☐ 8.91
    - ☐ 3.33

6. **The hippopotamus falls at exactly the same rate as an earthworm in a vacuum!**
    - ☐ This statement is not true.
    - ☐ This statement does not hold true on the moon.
    - ☐ This statement is correct, because freefall acceleration is independent
      of mass.
    - ☐ The statement is true. Although the hippopotamus is more strongly attracted,
      it is also heavier, meaning that more mass needs to be moved.

7. **Is the accuracy of our measured result impacted adversely or positively by
    doubling the drop height in our experiment, or does it not matter?**
    It is impacted
    - ☐ positively
    - ☐ does not matter
    - ☐ adversely

    Explanation:

8. **What did Felix Baumgartner achieve on October 14, 2012?**
    - ☐ supersonic speed
    - ☐ a jump from a height of 36.5 km
    - ☐ 5.2 seconds of zero gravity

9. **Where can knowledge about freefall come in handy?**
    - ☐ in aviation and aerospace, to simulate zero-gravity conditions in parabolic flights
    - ☐ in the design of new cars (reducing aerodynamic resistance), to economize on fuel
    - ☐ in the design of ski jumps and ski-jump landing strips