

The Mechanical Universe
NEWTON'S LAWS
17min



Read the following questions before the video begins. Answer the questions while the video is in progress. This is an **INDIVIDUAL** effort, so complete it by yourself.

DON'T ASK OTHERS FOR ANSWERS since doing so would be cheating.

Most of the important information (and answers to the questions on this sheet) is in the text spoken during the presentation. So don't become entranced by the visual imagery; concentrate and stay focused on the words!

1. Force and acceleration have definite _____.

2. Acceleration is

- A. the position of something.
- B. how fast something changes its position.
- C. how fast something changes its velocity.

3. When a body falls, what's known about acceleration? (**CHOOSE ALL THAT ARE CORRECT.**)

- A. It's constant
- B. It increases
- C. It decreases
- D. It's the same for all bodies
- E. It's different for different bodies

4. With his first law, Newton embraced the idea of _____.

5. Newton (**WAS / WAS NOT**) the first to ponder the path of a flying projectile on earth.

6. Consider a projectile. In the horizontal direction, there is _____ force and _____ acceleration.

7. The mediæval idea of impetus fell short of the principle of _____.

8. While Galileo's *kinematics* describe motion, Newton's *?* explained it.

- A. laws
- B. findings
- C. rules
- D. writings
- E. dynamics
- F. kinematics

9. _____ is Newton's second law.

10. For every action, there is a(n) _____ reaction.