

MECHANICS QUIZ: NEWTON'S LAWS

The following items are listed as a guide for what to focus on during your studies. An equations sheet will be provided.

- Be able to convert between metric units. Be able to convert between imperial and metric units.
- Understand and be able to apply Newton's 1st Law of Motion.
- What is inertia?
- Be able to apply the Equilibrium Rule to different situations, including free body diagrams. Be able to determine the net forces of a system using a free body diagram.
- Know the difference and be able to give examples of something in static vs. dynamic equilibrium.
- Be able to interpret graphs of velocity, acceleration, and distance.
- Be able to calculate acceleration without given force or mass.
- How are speed and velocity different from each other? Be able to apply and give examples.
- Be able to apply Newton's 2nd Law.
- Be able to explain and apply free fall and terminal velocity.
- Be able to mathematically determine speed of free fall, average speed of free fall, and distance of fall.
- Understand and be able to explain mass vs. weight. Be able to convert between kg, N, and pounds.
- Be able to explain and apply Newton's 3rd Law of Motion.