**HPhysics Study Guide for test: forces, etc.**

* Be able to determine acceleration, mass, or force given other components (calculations using Newton’s second law)
* Be able to deduce relationships of objects in motion
* Be able to draw force body diagrams as appropriate for a given scenario
* Understand inertia
* Be able to discern forces upon an object, and describe in terms of action and reaction forces
* Be able to consider, possibly calculate, tensions on ropes/cables in problems
* Understand normal force
* Be able to calculate vectors for friction
* Be able to separate two-dimensional motion into vertical and horizontal components, as needed, for problem-solving
* Be able to calculate simple circular motion problems
* Understand and describe relative motion
* Understand and apply Newton’s Universal Law of Gravitation
* Understand concept of center of mass