**Vocabulary: Atwood Machine**



**Vocabulary**

* Acceleration – the change in velocity per unit time.
	+ Acceleration is calculated by dividing the change in velocity by the elapsed time: *a* = ∆*v* / ∆*t*.
	+ For example, if an object accelerates from 0 m/s to 10 m/s in 2 seconds, the acceleration is 5 m/s/s, or 5 m/s2.
	+ Acceleration is positive when the velocity is increasing and negative when the velocity is decreasing.
* Atwood machine – a device that consists of two masses suspended over a *pulley*.
* Newton’s second law – the force acting on an object is equal to the product of its mass and acceleration: *F* = *ma*.
	+ The greater the force on an object is, the greater its acceleration.
	+ If you add mass to an object, it will accelerate less rapidly under a given force.
* Pulley – a simple machine consisting of a wheel with a groove for a rope or cable.
* Tension – the force exerted by a string, rope, chain, cable, etc. on another object.
* Weight – the downward force of gravity on an object.
	+ The symbol for weight is *w*.
	+ The greater the strength of gravity is, the more the object weighs.
	+ The greater the mass of the object is, the more it weighs.
	+ To calculate weight, multiply the mass (*m*) by the gravitational acceleration (*g*):

*w* = *mg*

* + - On Earth’s surface, *g* is equal to 9.81 m/s2.