Weight, force, gravity and energy are pretty much living in the same neighborhood, and you will notice that being hit by a 2.35 pounds softball travelling at 90 miles per hour is pretty much as painful as taking a hit from a falling 2 kilogram brick from a two-story building. Why is this so? While the softball being lighter in weight accelerated so fast gaining more and more kinetic energy as it got closer to you, the brick on the other hand was quite heavier. Both objects will probably give you a concussion and thatâ€™s because it was the kinetic energy that got you and not just the softball.

In physics the force of Earthâ€™s gravity acting on matter is 1g and is equivalent to 32 feet per second squared. At this constant all objects possessing mass will get their individual significant weight; however, if an object which already possessâ€™ mass travel twice or more than 1g then you will have increased its weight as many times as its speed travelling relative to 1g. This is called force and force is equated to be:

So that the force of that 2.35 pound softball multiplied by 90 miles per hour is equal to 211.5 newtons. 1 newton is equal to 0.225 pounds so we multiply this by 211.5 would show us a 47.6 pounds of force packed in a surface area of no more than 3 inch squared.

Weight variation can have thousands of effects on the object they act against. An example of buoyancy of a huge 20,000 ton vessel, the volume of air in its hull is actually what makes it buoyant against the water and if you exceed that limit the boat will roll over on its belly and sink. Another example would be the maximum weight load that a small suspension bridge can hold. At any given time a suspension bridge can hold up to 100 to 1,000 tons of weight, which is the equivalent of 25 to 250 cars.

Perhaps the most incredible outcomes of weight differences is what is observed in accidents and wars. Generally if a 5,000 pound vehicle was immediately halted from its constant speed of 50 miles per hour, it would crush anything in its path. If a soldier shot his enemy with a bullet travelling at 500 meters per second, this would mean instantaneous death upon impact. The effects of weight/mass when it is accelerated can be devastating.

Looking at smaller things objects weighing less than a kilogram or a pound is by no means insignificant. Letâ€™s say you were preparing sugar grains to sell and you want each plastic or paper container to have the right amount of weight for the amount theyâ€™ll be sold at. Therefore you will need a weighing scale preferably one that is calibrated to read grams, ounces, centigrams and milligrams. You can sell them at 40 cents per 1000 grams or whichever weight unit you decide.

The tricky part of figuring out these equations is when you original numbers are in measurements you donâ€™t understand. Youâ€™re not sure if these measurements are small, large, or anything in-between. The best advice is to use an online weight conversion tool to convert the units into those that you understand first so you can fully comprehend the numbers.

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For more detailsa online weight conversion tool

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