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It is great physics error to teach: mass is measure of inertia; it is not true!

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Abstract -

Physics teaches correctly when it says: inertia is the property that objects have to resist to modify their state of rest or movement.

But physics teaches wrongly when it says: "mass is a measure of inertia". It is not true!

Physics is wrong to say that mass is a measure of inertia; because it is not true. The measure of inertia of a body depends on its weight or its energy. We will analyze the mathematical and scientific proof:

If we consider the mass of a body as m1kg, on Earth, the calculation will be: m. g = w or mass m multiplied by the acceleration of gravity g is equal to weight w. If the acceleration of gravity g at sea level is 9.81m / s², the calculation will be 1. 9.81 = 9.81N. The weight will be 9.81 Newton.

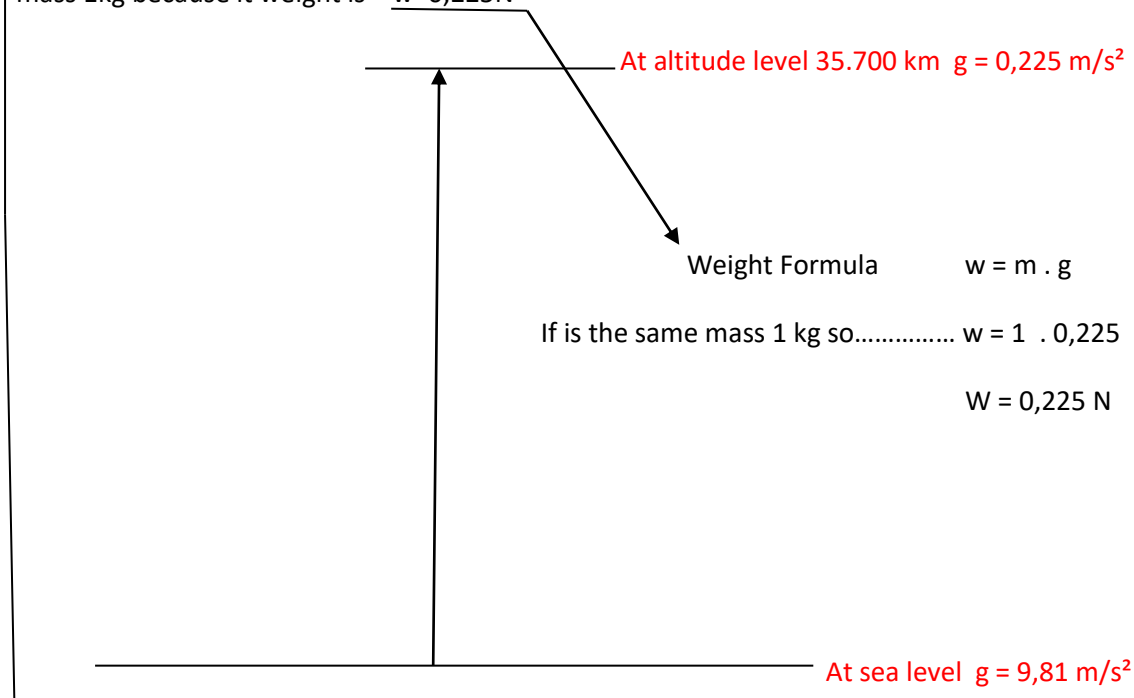
In this example to move the mass m1kg at sea level there must be a force *x* to overcome its inertia (opposition to the movement) relative to the weight of 1kgf. However, if we put this same mass m1kg at the altitude where a satellite flies at 35,700km, then the acceleration of gravity g is 0.225m / s² so the calculation will be m. g = w as 1. 0.225 = 0.225N. The weight at this altitude will be 0.225 Newton or 0,225kgf

Note that for a body with the same mass, varying the acceleration of gravity with altitude also changes the weight of this body, however, the mass remains unchanged, immutable and invariable in any gravitational field. It is obvious that with less acceleration of gravity the weight of the body decreases and the weight being LOWER also LOWER will be the opposition of the body to the movement and it will require SMALLER force to overcome its inertia. That is, the inertia changes when changes the acceleration of gravity due the change of weight but no changes the mass. Hence, THE INERTIA OF AN OBJECT IS NOT MEASURED OF HIS MASS; THE INERTIA OF A BODY DEPENDS ON ITS WEIGHT AND NOT OF ITS MASS. **PHYSICS MUST TO CHANGE YOUR TEACHING BECAUSE IT IS WRONG!**

But why does the inertia of a body also depend on its energy? It is because as Einstein taught: **energy also has inertia as matter.** It is easier to overcome the inertia of a body at rest than to accelerate this same body if it is already in motion. **In motion the inertia of the body will be greater than the inertia of rest because it will already have in itself NO INCREASED WEIGHT, but the value of the kinetic energy of the added motion itself.** "Energy has inertia," said the Master of relativity. And while greatly increasing the inertia of this body by its speed, YOUR MASS WILL NEVER INCREASE, IT WILL ALWAYS REMAIN THE SAME, INVARIABLE. Mass does not vary with the variation of gravity nor with the variation of velocity and **INERTIA IS NOT MEASURED OF THE MASS OF A BODY. PLEASE PHYSICS TEACH CORRECTNESS CONCEPTS.**

If we need a smaller force to move the <u>same mass of a body</u> when the weight of the body decreases this is because the inertia of a body is measured of its weight and NOT of its mass. <u>Inertia does not measure the mass. INERTIA DEPENDS ON WEIGHT</u>.

For example at altitude level 35.700 km We need a force LESS THAN "x" to move the same mass 1kg because it weight is w=0,225N



Example at sea level: Inertia for mass 1kg and w=9,81 N

We need force "x" to move mass 1kg and w=9, 81N at sea level

Weight Formula w = m . g

If mass 1kg so.....w = 1 . 9,81 (at sea level)
w = 9,81N

***But see what force we need to move <u>the same mass</u> at altitude level 35.700 km**