

# Universal Physics Journal

## Question 9: Will you help me fill in the blanks?

Hello Ethan,

Please help me fill in the blanks

1. a body at rest tends to ----- at rest
2. a body in motion tends to ----- in motion
3. For every action there is an -----and----- re-action

Thank you, E.B., Weston, Ontario, Canada

Hello E.B.:

Aristotle's work in Physics has never really gone away. He taught us that a moving object's motion is maintained by a "mover". Galileo proved Aristotle wrong when he taught us that it takes a force to change an object's motion and with the absence of such an acceleration-causing action force, the moving object has no choice but to continue on with its motion unchanged. No "mover" required.

The problem is that scientists smiled at Galileo, patted him on the back and went right on believing in Aristotle's "mover" having renamed it "inertia". Newton wrote that an object's motion is "maintained by its inertia only" which is just the same as Aristotle telling us that an object's motion is maintained by a "mover".

Accordingly, to answer your three questions:

(1) A body at rest (rest-motion) doesn't "tend" to do anything. It has no choice but to wait in its current state of uniform motion (rest-motion) for the next acceleration-causing action force to come along. The wait can be for a lifetime. Meanwhile the object's current state of rest-motion will continue on due not to the presence of Aristotle's "mover" or Newton's version of "inertia" but to the simple absence of an acceleration/Action force. (See Article I The Reality of Newton's Inertia.)

(2) Given the equality of rest and uniform motion (rest-motion), see (1).

(3). Every action force is equally opposed or supported by a reaction force, another action force or combination thereof. This simplification of the Universal Law of Mutual Forces is more accurate than the first half of Newton's LAW III. (See Article III, The Equality of Opposing Forces.)

If you are so inclined, I have a question I would like you to answer.

[1]. Given that every force is always opposed by an equal force, then how is a "net" or "overall" or "unbalanced" or "unopposed" force possible? If you know how, please describe an event that will reveal to me the reality of such a Newton's-LAW-III-violating force.

Thank you for visiting the Universal Physics Journal.

Ethan Skyler

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