

### Answer on Question #38033 – Physics - Mechanics | Kinematics | Dynamics

What is the role of tension in string?

#### Solution:

Tension is the pulling force exerted by a string, cable, chain, or similar solid object on another object. It results from the net electrostatic attraction between the particles in a solid when it is deformed so that the particles are further apart from each other than when at equilibrium, where this force is balanced by repulsion due to electron shells; as such, **it is the pull exerted by a solid trying to restore its original, more compressed shape**. Tension is the opposite of compression. Slackening is the reduction of tension.

As tension is the magnitude of a force, it is measured in Newtons (or sometimes pounds-force) and is always measured parallel to the string on which it applies. There are two basic possibilities for systems of objects held by strings: either acceleration is zero and the system is therefore in equilibrium, or there is acceleration and therefore a net force is present. Note that a string is assumed to have negligible mass.

