In this paper, we talk about discussing two topics covered under the subject area of mechanical engineering: mechanical advantage and combustion.

A given machine creates mechanical advantage (MA) is created by a machine that makes possible effective the performance of work using less force. We will define as MA is defined as follows:

\[ \text{MA} = \frac{\text{Output force}}{\text{Input force}}. \]

MA is divided into two categories: ideal mechanical advantage (IMA) and actual mechanical advantage (AMA). The former IMA is also called theoretical mechanical advantage and is the MA of an ideal machine. The second one AMA is the MA of a real machine. This type of MA, which takes considers the factors of pertaining to the real world, like such as energy lost in friction processes.

Some examples of machines that exhibit MA are beams, screwdrivers, doorknobs, pulleys, and screws.

In below paragraph, we describe working the functioning of a pulley.

Think of Consider a simple compound pulley system that comprises of moveable and a movable pulley and a fixed pulley lifting a weight we will calldesignated as \( \text{A}_1 \). The tension in all the line, each line connecting these two pulleys, is calculated as \( \text{A}/3 \). Then yield MA = This yields an MA of 3.

For in cases wherein a moveable-moveable pulley and a fixed pulley lifting lift \( \text{A} \) with an additional pulley channeling the lifting force in a downward direction, the tension in all lines each line is still \( \text{A}/3 \). And MA and the value of MA is 3.
Fixing a fixed pulley to the single-pulley system increased mechanical advantage increases MA.

Next is The next topic of this discussion is combustion. This is a sequence of exothermic reactions wherein a fuel and an oxidant react. This produces not only heat but and chemical species that have undergone modification or conversion in during the sequence of reactions. There are two types of combustion: complete and incomplete.

Complete The former type of combustion takes place in the presence of sufficient oxygen levels. But, however, only a limited number of products are produced from the reactant combusting. In incomplete reactant that is undergoing combustion, In contrast, in the latter type, insufficient oxygen is available for the reactant. The by-products of incomplete combustion are usually unhealthy harmful to health.