What is a machine?

What is input force?

What is output force?

Draw a diagram of how machines make work easier. (See figure 5, page 209)

According to the diagram you drew, what are 3 ways that machines make work easier?

According to the diagram you drew, how does output WORK compare to input WORK in each type of machine?

According to the diagram you drew, how does the output FORCE compare to input FORCE in each type of machine?

According to the diagram you drew, how do the distances compare?

What is mechanical advantage and how is it calculated?

What is machine efficiency?

How is machine efficiency calculated?

What is actual mechanical advantage (AMA)?

What is ideal mechanical advantage (IMA)?

|  |  |  |  |
| --- | --- | --- | --- |
| **For a machine that** | **Force (< , = , >)** | **Distance (< , = , > )** | **Work (< , = , > )** |
| **increases force** | input output | input output | input output |
| **increases distance** | input output | input output | input output |

How do you calculate the IMA of an inclined plane?

How do you calculate the IMA of a lever?

How do you calculate the IMA of a wheel and axle?

What is a fixed pulley?

What is a movable pulley?

What is the IMA of a pulley system?

What is a compound machine?