Mechanical Advantage

And

Levers.

IMA (is different for all simple machines) for levers = Effort length / Resistance length.

E R

Effort length Resistance length

1m 1m

IMA = ??

There are three different parts to all levers:

1. Effort: is the force that is causing the motion of the object being moved by the lever.
2. Resistance: is the force that is supplied by the object that is being moved.
3. Fulcrum: is the point at which the lever pivots.

There are three different classes of the levers:

1st Class: are levers that have the fulcrum in between the resistance and the effort.

R E

Example: See – Saw

2nd Class: are levers that have the resistance between the effort and the fulcrum.

E R

Example: Wheel barrel.

3rd Class: are levers that have the effort in between the fulcrum and the resistance.

E R

Example: Baseball bat.