



Material:

Item-no.	Qty.	Description
DM610-1S	1	Stability apparatus

Purpose

Dependence of stability on the center of gravity above the stand area

Preparation

The stability apparatus is set up on a horizontal, stable surface.

Experiment

The stability apparatus is carefully brought into various inclined positions.

The plumb line marks the location of the system's center of gravity above the stand area.

We observe the inclined position and the position of the plumb line from the most frontal perspective possible.

Result

The body tilts as soon as an inclined position is reached in which the line of action of the weight goes through the center of gravity outside the standing area.

Explanation

The extended body can be treated like a single mass point by introducing the centre of mass / centre of gravity (in which the entire weight acts).

If the line of action of the center of mass lies outside the support surface, a torque is created that tilts the body.

Note

The stand area does not have to correspond to the support surface, is formed by the tilting edges. (e.g. armchair, person)