

# Moment of a force

The *moment* of a force (also known as *torque*) is a measure of the tendency of the force to rotate an object around a given axis. For instance a force acting on a lever causes a moment about the lever's pivot point.

- A force  $F$  acting along a line whose minimum distance from point  $P$  is  $d$  causes a moment  $M = Fd$  about the point  $P$ .
- A force  $\mathbf{F}$  acting at a point with position vector  $\mathbf{r}$  has moment  $\boldsymbol{\tau} = \mathbf{r} \times \mathbf{F}$  about the origin (where  $\times$  denotes the vector or cross product).

Moment has dimensions  $ML^2T^{-2}$  and SI unit Nm, Newton metres.