



$dV = A dx$: volume

$\rho dV = \rho A dx$: massa
(ρ = dichtheid [$\frac{\text{kg}}{\text{m}^3}$])

$g \rho dV = g \rho A dx$: kracht

$x g \rho dV = x g \rho A dx$: moment

$$M = \int_0^l x g \rho A dx$$

$$= g \rho A \int_0^l x dx$$

$$= g \rho A \frac{l^2}{2}$$

$$= g \rho A \cdot l \cdot \frac{l}{2}$$

$$= g \cdot \rho V \cdot \frac{l}{2}$$

$$= g \cdot m \cdot \frac{l}{2}$$

$$= G \cdot \frac{l}{2}$$