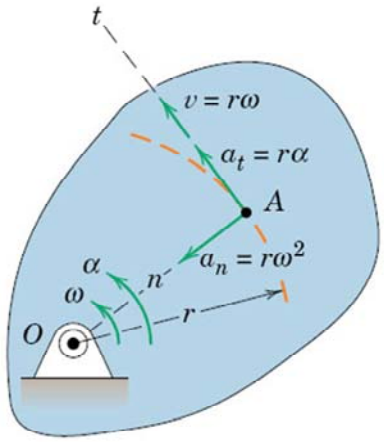
Question of the Day

Point ***A*** on a rigid body rotating about an axis fixed at ***O*** has a ***velocity*** of 4 m/s and ***tangential acceleration*** of 8 m/s^2. The radius (***r***) of the point ***A***'s path is 2 m.

Determine the ***angular velocity*** (ω) and ***angular acceleration*** (α) of the rigid body.



ME 231: Dynamics

omega = v/r = 4/2 = 2 rad/s

alpha = a_t/r = 8/2 = 4 rad/s^2