No clickers & yes calculators.

Have out :

1) Ch. 9 vocabulary
2) pg. 233 1 - 5 all

Do the worksheet on the podium on your OWN correcting for accuracy!!

Apr 12-11:47 AM

$10.6\ m/s \cdot \frac{1\ km}{1000\ m} \cdot \frac{3{,}600\ s}{1\ hour}$

$38.4\ km/h$

$65\ km/h \cdot \frac{1000\ m}{1\ km} \cdot \frac{1\ h}{3600\ s}$

Apr 12-12:29 PM

9.1 Angular Momentum

DEFINE THE ANGULAR MOMENTUM OF AN OBJECT

Angular Velocity- changes if TORQUE is Applied

- Angular acceleration – $\alpha = \frac{\Delta \omega}{\Delta T}$
- Newton's 2nd Law for rotational motion- $\alpha = \frac{\tau_{net}}{I}$
  - SO: $\frac{\Delta \omega}{\Delta T} = \frac{\tau_{net}}{I}$
  - Rearrange to: $\tau_{net} = I \cdot \frac{\Delta \omega}{\Delta t}$
  - Rearrange again: $\tau_{net} \cdot \Delta t = I \cdot \Delta \omega$
  - Angular impulse: $\tau_{net} \cdot \Delta t$
  - Angular momentum: $I \cdot \Delta \omega$

I = moment of inertia

ω = angular velocity

Angular momentum $= L$

$I = m \cdot r^2$

$kg \cdot m^2$

Forumula: $L = I \Delta \omega$

Units: $= kg \cdot m^2 / s$

Angular Impulse – Angular Momentum Theorem

$$\tau_{net} \cdot \Delta t = L_f - L_i$$

$$\tau_{net} \cdot \Delta t = I \cdot \omega_f - I \cdot \omega_i$$

Angular Velocity

CAN change by changing Moment of Inertia (the way the mass is distributed)

Demo: pg. 235

Diver:

Ice-skater:

Video:

Apr 12-12:51 PM