

get your clicker & a HW Quiz key

Review for Test tomorrow (Chapters 5 & 6)

-3" x 5" notecard, AP Eq'n sheet (provided), and your own calculator

Concepts

- Sir Isaac's 3 Laws
- inertia
- FBD
- Normal force
- static and kinetic friction
- spring constant
- centripetal acceleration and force
- pulleys
- tension in strings/ropes
- and don't forget the EMUAs*

Equations

$$v_x = v_{x0} + a_x t$$

$$x = x_0 + v_{x0} t + \frac{1}{2} a_x t^2$$

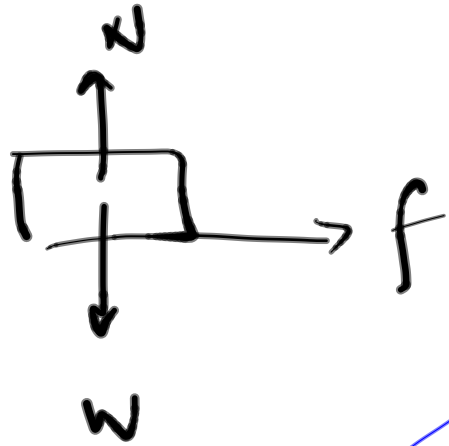
$$v_x^2 = v_{x0}^2 + 2a_x(x - x_0)$$

$$\vec{a} = \frac{\sum \vec{F}}{m} = \frac{\vec{F}_{net}}{m}$$

$$|\vec{F}_f| \leq \mu |\vec{F}_n|$$

$$a_c = \frac{v^2}{r}$$

$$|\vec{F}_s| = k|\vec{x}|$$



$$\sum F_x = ma_x$$

$$f = m \cdot a$$

$$\begin{cases} W = mg \\ m = \frac{W}{g} \\ m \approx 11 \text{ kg} \end{cases}$$

$$a = 1.125$$

$$f \approx (11 \text{ kg})(1.125 \text{ m/s}^2)$$

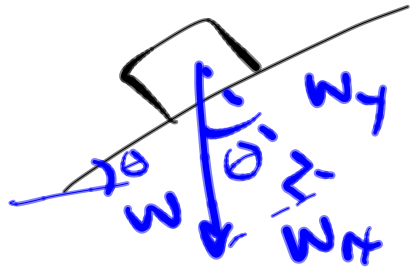
$$f \approx 13 \text{ N}$$

$$v^2 = v_0^2 + 2a(x - x_0)$$

$$a = \frac{-v_0^2}{2x}$$

$$= \frac{-(3)^2}{2 \cdot 4}$$

$$a = -\frac{9}{8}$$



$\sum F_x = ma_x$
"HORIZONTAL FORCES"



$$\begin{aligned} W_y &= W \cos \theta \\ &= mg \cos \theta \end{aligned}$$

$$W_x = mg \sin \theta$$

$\sum F_y = ma_y$
"VERTICAL FORCES"

