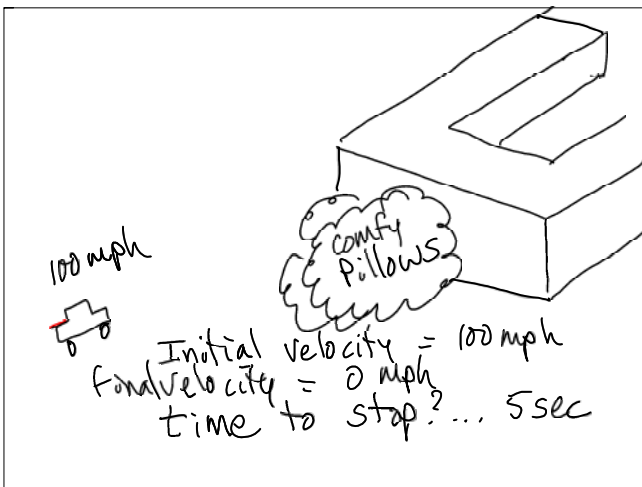
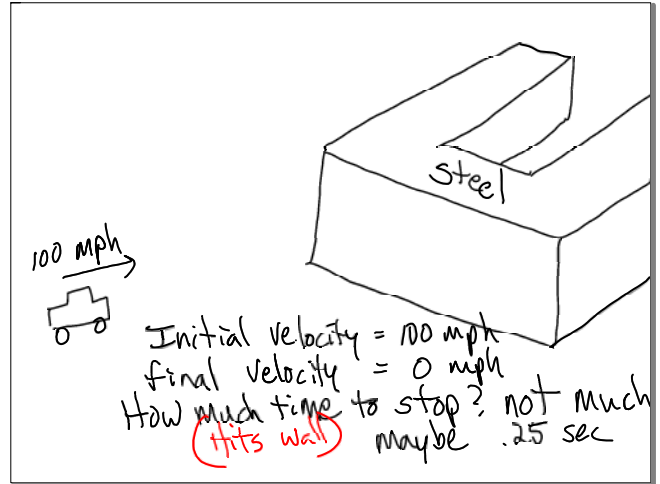


Jumping off of a short stack of Books with

1. legs bent on landing Took a little longer...
2. legs straight on landing very short time, harder landing



Acceleration - the change in velocity divided by the time it takes

$$\text{Acceleration} = \frac{V_{\text{final}} - V_{\text{initial}}}{\text{time}}$$

$$= \frac{0 - 100\text{mph}}{.25 \text{ sec}}$$

$$= \frac{-100\text{mph}}{.25 \text{ sec}}$$

$$= \underline{\underline{-400\text{mph}}}$$

sec

$$\text{acc} = \frac{v_f - v_i}{t}$$

$$\text{pillows} = \frac{0 - 100 \text{ mph}}{5 \text{ sec}}$$

$$= \frac{-100 \text{ mph}}{5 \text{ sec}} = -20 \frac{\text{mph}}{\text{sec}}$$

example about accelerating at a traffic light.

Jumping off of books

Time to stop?

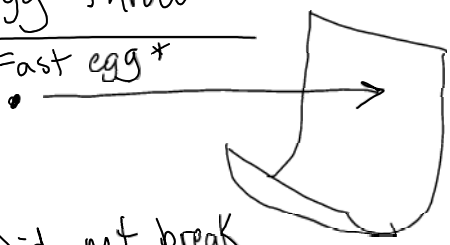
Bent legs - longer

straight legs - shorter

(less acc with legs bent)

Egg Throw

Fast egg*



*Did not break
Why? We increased the time to stop

If we were to drop the egg, from the ceiling, what could we do to ensure that it does not break?

1. increase the time to stop
how? pillows on floor
sheet above floor
the egg carries its own "pillow"
2. Slow/decrease the initial velocity
Parachute?

Tomorrow, the egg drop
(at least we start it.)