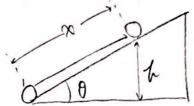
* Abody at rest

- >> accelerated to N= 200 m/s along inclined surface 8-45° (4) relative to burisontal.
 - >> travels x = 10 m
 - >> work done w = 200 kJ = 2,00x 105 J
 - >> g= 9.81 m/s2

mass (kg) of body



EQUATION

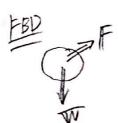
Postential EN: U= mgh

Kinedic FN: K= 1mv2

conservation ud EN W = K+V

ASSUMPTION

no friction, and other energy losses



SOLN

(height) h = 20 sin 0 = 10m. 12 = 512 m

$$\nabla V = mgh + \frac{1}{2}mv^2$$

$$M = \frac{1}{2h + \frac{1^2}{2}}$$

$$= \frac{2.00 \times 10^{5} \text{ J}}{(9.81 \text{ m})(550 \text{ m}) + (\frac{200^{5} \text{ m}^{2}}{25^{2}})} \approx 9.965 \text{ kg}$$

$$\approx 9.965 \text{ kg}$$

$$\approx 9.97 \text{ kg}$$