Physics Honors Equations Sheet - Lundy

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Useful equations:

$$V_f = V_i + at \qquad V_{av} = \frac{\triangle x}{t} \qquad V_{av} = \frac{V_i + V_f}{2}$$

$$a = \frac{V_f - V_i}{t} \qquad \triangle x = \frac{1}{2}at^2 + V_i t \qquad V_f^2 = V_i^2 + 2a\triangle x$$

$$V_{ix} = \cos\theta \cdot V_i \qquad V_{iy} = \sin\theta \cdot V_i$$

$$\triangle x_x = V_x \cdot t \qquad \triangle x_y = \frac{1}{2}a_y t^2 + V_{iy}t \qquad \triangle x = -\frac{\sin(2\theta)\cdot V_i^2}{a}$$

$$|F_{sf}| = \mu_s \cdot |F_n| \qquad |F_{kf}| = \mu_k \cdot |F_n| \qquad F = ma$$

$$\text{GPE} = mgh \qquad \text{EPE} = \frac{1}{2}kx^2 \qquad \text{KE} = \frac{1}{2}mV^2$$

$$F_t = mg + ma$$

Stuck? Try:

- Listing variables

- Considering which variables are 0

- Drawing a picture

- Looking for an equation that matches the variables