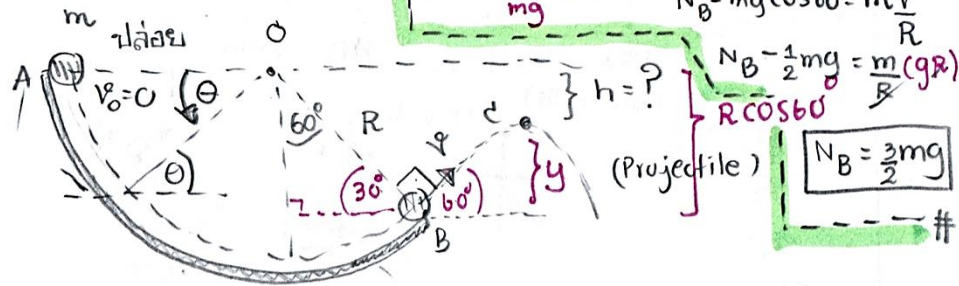
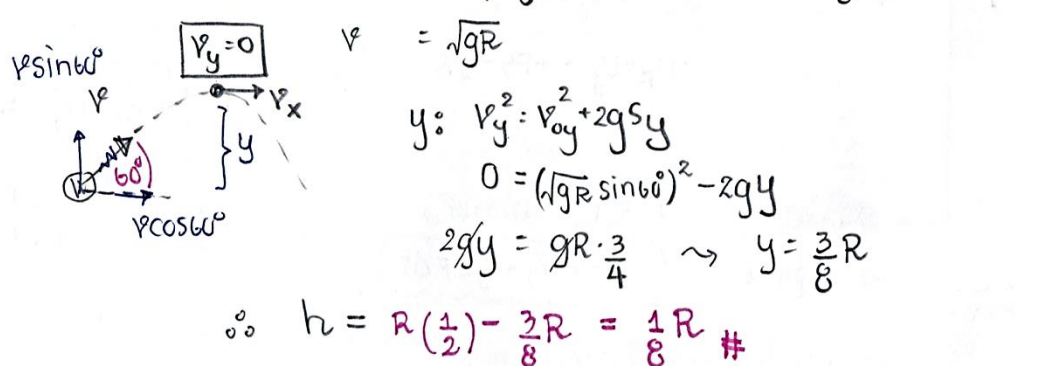
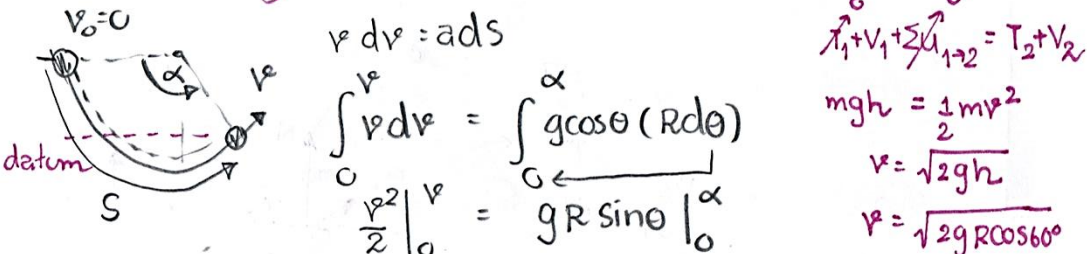
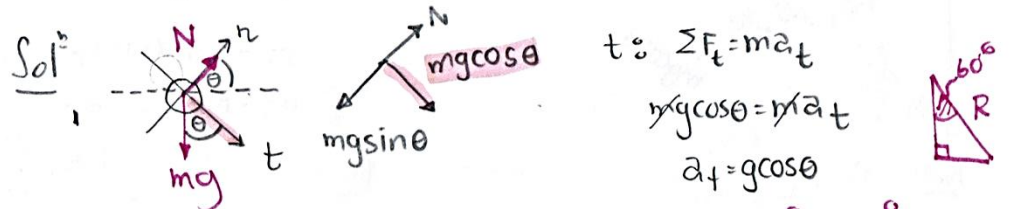


หาค่า? Preflight



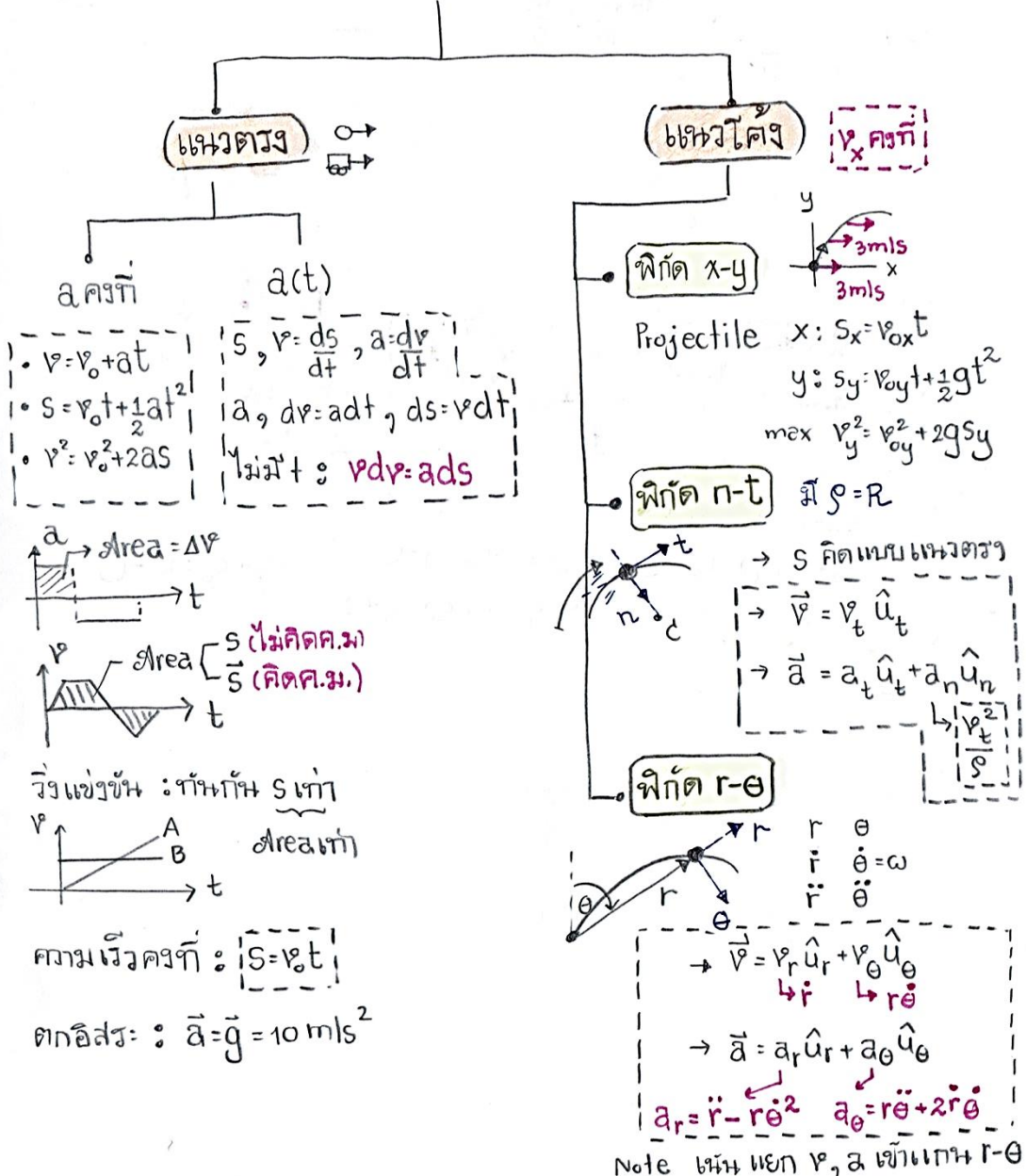
จงหา 1) h
 2) เวกเตอร์ปฏิกิริยาที่ต.น B (n-t)



Snap Shot

Dynamics Mid '17

CH1 kinematics : ไม่สนใจผลของแรง-มวล



ทฤษฎีบทแบบสัมพัทธ์ : รวมแบบ $\vec{i}, \vec{j}, \vec{k}$

$$\left(\vec{v}_{A/B} = \vec{v}_A - \vec{v}_B \right), \left(\vec{a}_{B/C} = \vec{a}_B - \vec{a}_C \right)$$

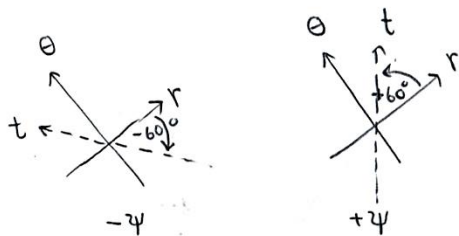
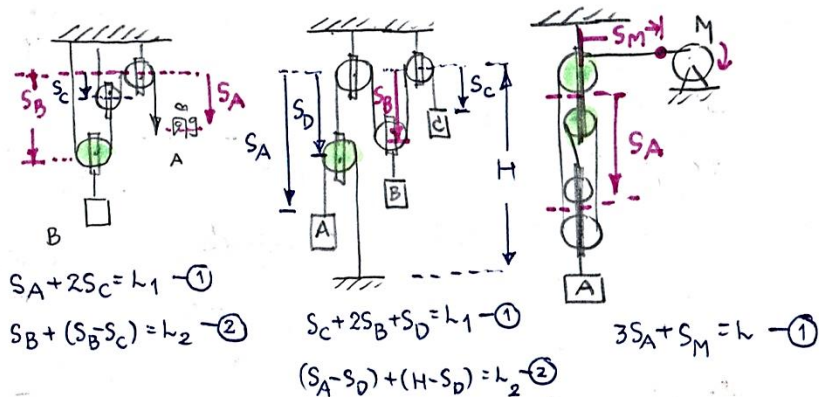
Note 1) $v = 18 \frac{\text{km}}{\text{h}}$ $\vec{v} = (5 \sin 37^\circ) \vec{i} + (5 \cos 37^\circ) \vec{j}$

$= 18 \times \frac{5}{18} = 5 \frac{\text{m}}{\text{s}}$

2) $\vec{a}_{A/B} = 2\vec{i} - 2\vec{j}$ $a_{A/B} = \sqrt{2^2 + 2^2} = 2\sqrt{2}$ $\theta = \tan^{-1}\left(\frac{2}{2}\right) = 45^\circ$

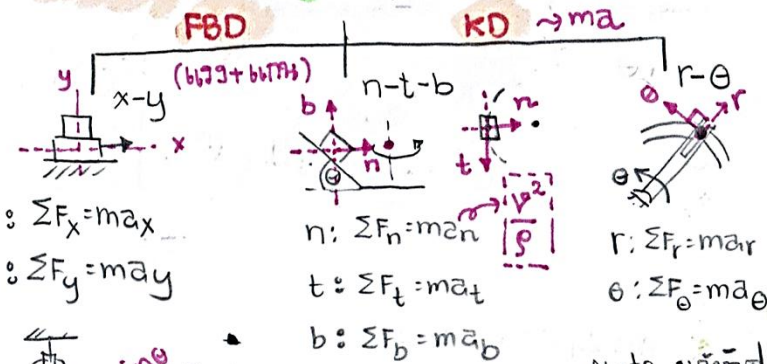
ระบบรอก : เส้นลวด $\sum s = L$

Note



CH2 kinetics : สหพัทธ์ของ F, m ต่อทฤษฎีบท

Newton (F, m, a, v, s, t) : $\sum F = ma$



Note 1) $f = \begin{cases} f_s = \mu_s N \\ f_k = \mu_k N \end{cases}$

2) $F = 3t^2 + 2t$ แทนในสมการได้โดย

W & E (ไม่ใส่ a)

$$\rightarrow U_s = -\frac{1}{2}k(x_2^2 - x_1^2)$$

$$\rightarrow P = \frac{U}{t} = Fv$$

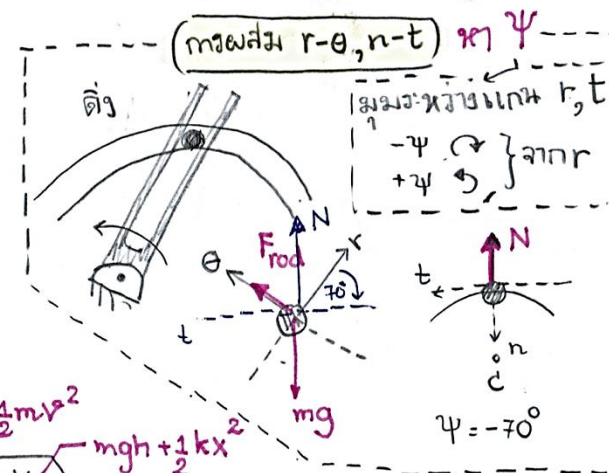
$$\rightarrow T_1 + V_1 + \sum U_{1 \rightarrow 2} = T_2 + V_2$$

$$\begin{matrix} s_1 & ① \rightarrow ② \\ s_2 & \text{datum} \\ s_3 & \text{eq} \end{matrix} \quad U_F + U_f = +FS - fs \quad (F_{\text{non, con}})$$

Momentum (F, t, v ไม่ใส่ a)

$$\rightarrow \text{Impulse} : m\vec{v}_2 = m\vec{v}_1 + \int \sum F dt$$

$$\left[\frac{e = v_2 - v_1}{u_1 u_2} \right] \rightarrow \text{COM} : (m_1 \vec{u}_1 + m_2 \vec{u}_2 = m_1 \vec{v}_1 + m_2 \vec{v}_2) \quad \sum F \text{ แวกลัพธ์} \quad \int \sum F dt \quad \text{Area}$$



$$\frac{m\vec{v}_2 - m\vec{v}_1}{t} = F$$

$$\vec{v}_1 \rightarrow \vec{v}_2 \quad t \downarrow F \uparrow \quad t \uparrow F \downarrow$$