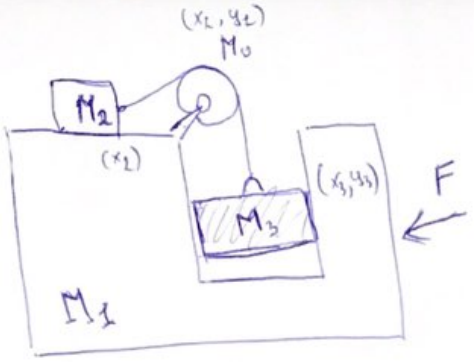

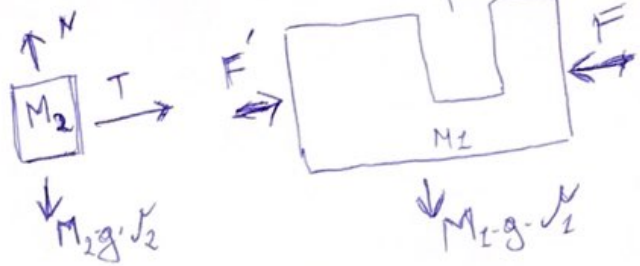

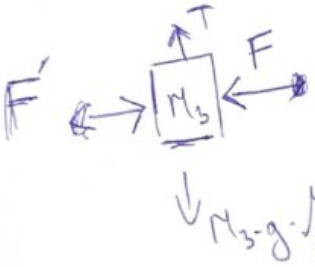

For M_1. $M_1 \cdot a \cdot \nu_1 = T \cdot \nu_1$

For M_2 $M_2 \cdot a \cdot \nu_2 = F' \cdot \nu_2$

For M_3 $M_3 \cdot g \cdot \nu_3 = T \cdot \nu_3$.

$M_1 \cdot a \cdot \nu_1 = (F - F' - T)\nu_1$

$M_3 \cdot g \nu_3 = M_2 \cdot a \cdot \nu_2$. $\quad a = \frac{M_3}{M_2} \cdot g \cdot \frac{\nu_3}{\nu_2}$

$\nu_3 \cdot F' = M_3 \cdot a \cdot \nu_3$

$\nu_3 \cdot T = M_2 \cdot a \nu_3$

$M a = (F - F' - T) \cdot \nu \Rightarrow F = (M_1 \cdot a\nu_1 + M_3 \cdot a\nu_3 + M_2 \cdot a\nu_2)$

$= a(M_1\nu_1 + M_2\nu_2 + M_3\nu_3) = \frac{M_3}{M_2}(M_1 + M_2 + M_3) \cdot \frac{g\nu_3}{\nu_2}$.

Question: I don't know how to use $t(0), t(1), t(2), \cdots t(n)$

I know that $a(t) - a(0) = \int_0^t v(t)\,dt$.

Question: What is the linear interpolation of F?