

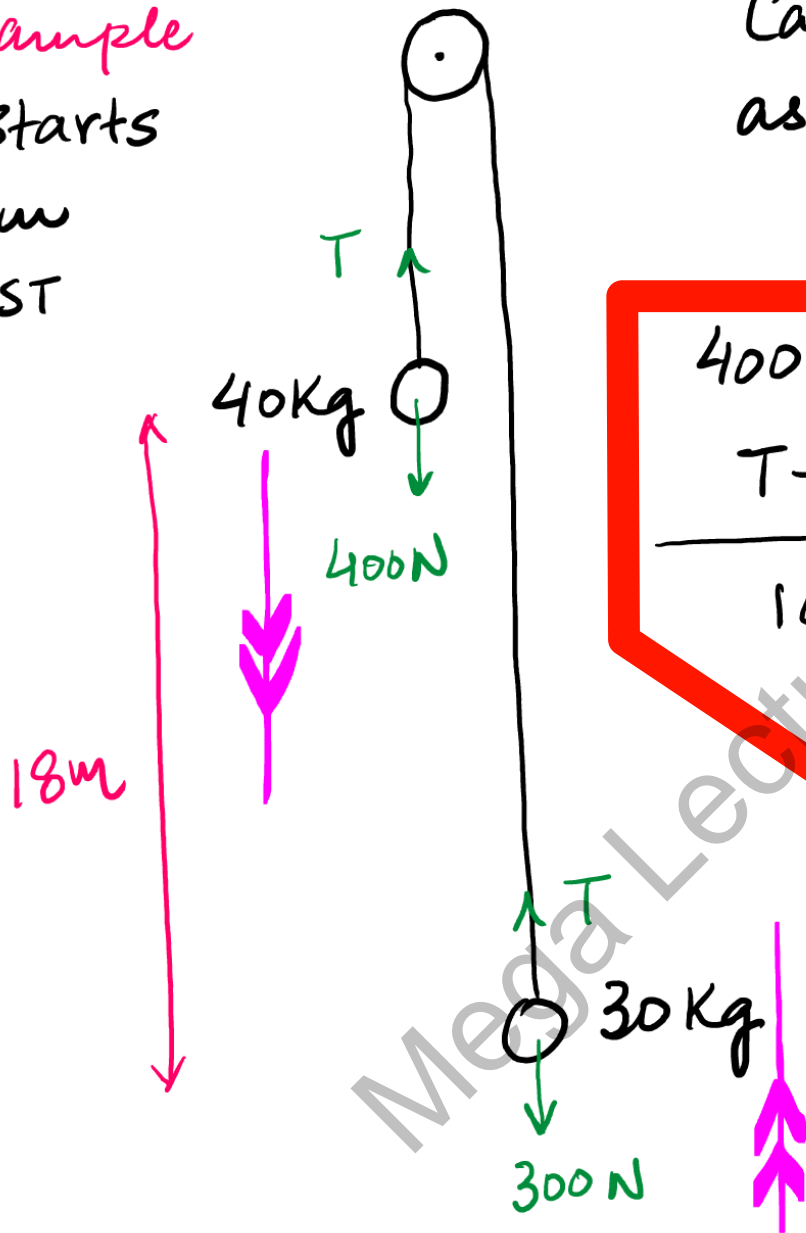
Theory dynamics slide 2

10 November 2020

19:39

Example
starts
from
REST

Cal. the speed
as they cross
each other?



$$\begin{aligned}
 400 - T &= 40a \\
 T - 300 &= 30a \\
 \hline
 100 &= 70a \\
 a &= \frac{10}{7} \text{ m/s}^2
 \end{aligned}$$

Stick with
this in this
situation

$$u = 0$$

$$v = ??$$

$$a = \frac{10}{7}$$

$$s = \frac{18}{2} = 9$$

$$v^2 = 0^2 + 2\left(\frac{10}{7}\right)(9)$$

$$v = 5.1 \text{ m/s}$$