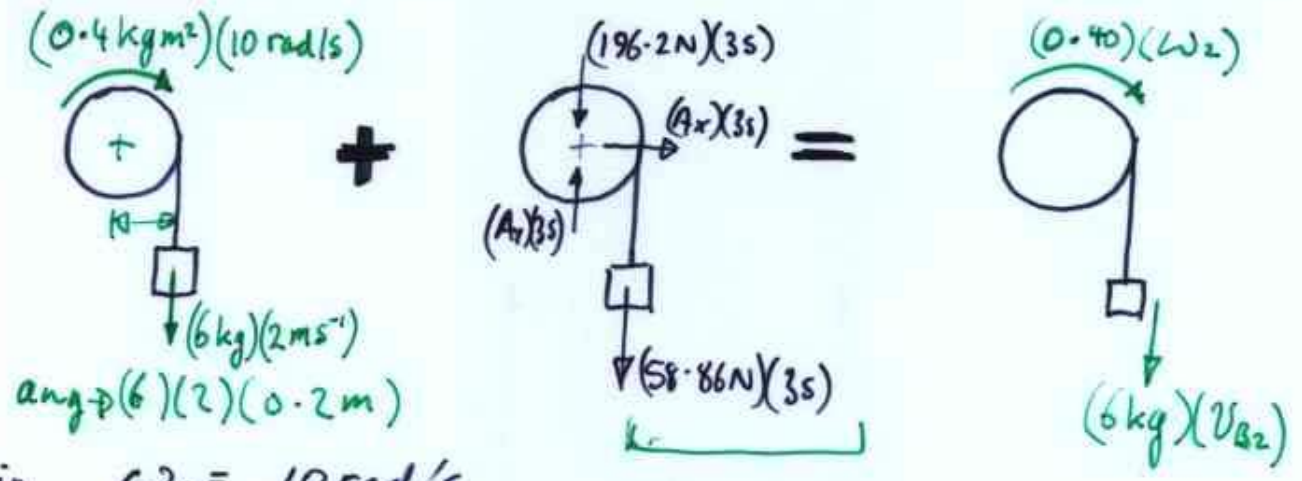


IN this way

$$\left( \sum \text{Sys ANG. MOMENTUM} \right)_{A,1} + \left( \sum \text{SYS. ANG. IMPULSE} \right)_{A1 \rightarrow 2} = \left( \sum \text{Sys ANG. MOMENTUM} \right)_{A,2}$$



Again  $\omega_1 = 10 \text{ rad/s}$   
 $\omega_2 = 5 v_{B2}$

$$\begin{aligned} & (+) \left[ \overset{\text{BLOCK}}{(6 \text{ kg})(2 \text{ m/s})(0.2 \text{ m})} + \overset{\text{DISC}}{(0.40 \text{ kgm}^2)(10 \text{ rad/s})} \right] \\ & + \left[ (58.86 \text{ N})(3 \text{ s})(0.2 \text{ m}) \right] \\ & = \left[ (6 \text{ kg})(v_{B2})(0.2 \text{ m}) + (0.40 \text{ kgm}^2)(5 v_{B2}) \right] \end{aligned}$$

Solve to get

$v_{B2} \approx 13.0 \text{ m/s}$

