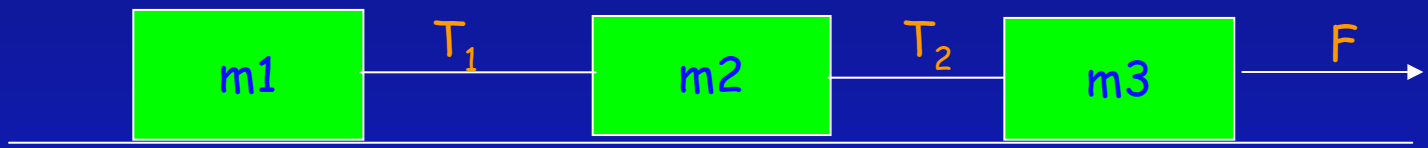
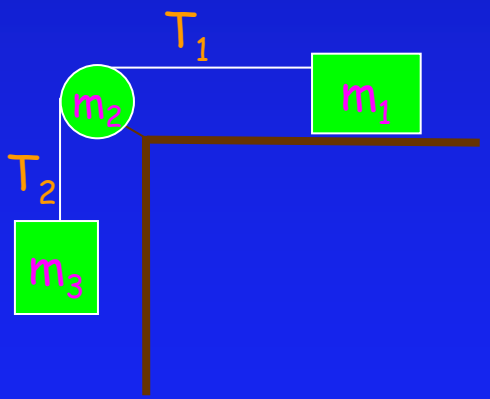
Tension…



Compare the tensions T_1 and T_2 as the blocks are accelerated to the right by the force F.

A) $T_1 < T_2$ B) $T_1 = T_2$ C) $T_1 > T_2$

$T_1 < T_2$ since $T_2 - T_1 = m_2 a$. It takes force to accelerate block 2.



Compare the tensions T_1 and T_2 as block 3 falls

A) $T_1 < T_2$ B) $T_1 = T_2$ C) $T_1 > T_2$

$T_2 > T_1$ since $RT_2 - RT_1 = I_2 \alpha$. It takes force (torque) to accelerate the pulley.