

P122 10.2 Multiple Masses
 Elevator problems:
 Sp Up Upwards (Sl Dn Downwards) Heavier
 $m_1 = 2245 \text{ kg}$ $a = 0.55 \text{ m/s}^2$

Tension

$\vec{a} = ? \rightarrow 0.55$ $T = ?$

$F_n = T - F_g$
 $T = F_n + F_g$
 $T = ma + mg$
 $T = m(a + g)$
 $= 2245(0.55 + 9.81)$ heavier
 $T = 23258.2 \text{ N}$

b) Sl. dn upwards
 T Sp. Up downwards (lighter)
 $F_n = F_g - T$
 $T = F_g - F_n$
 $T = m(g - a)$
 lighter = $2245(9.81 - 0.55)$
 $= 20788.7 \text{ N}$

SI Dn Upwards (Sp Up Downwards) Lighter

Mar 16-8:50 AM