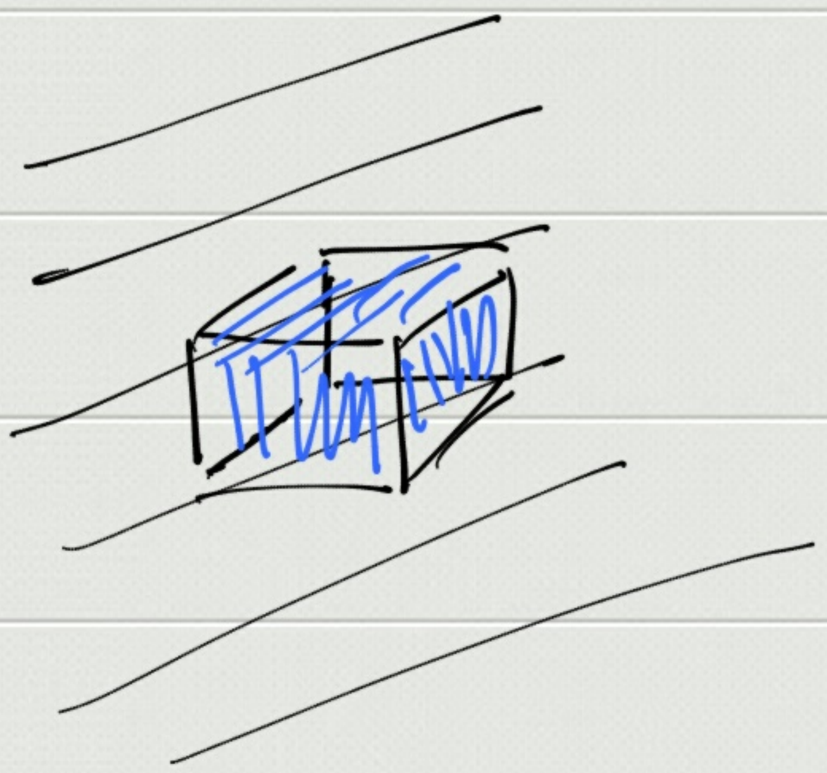
# Statica



$$\bar{F}_s + \bar{F}_v = 0$$

$$\bar{F}_s + m_f \bar{g} = 0$$

$$\Rightarrow \boxed{\bar{F}_s = -m_f \bar{g}}$$

$$\bar{F}'_s + \bar{F}'_v = \bar{R}$$

$$\bar{F}'_s = \hat{F}_s = -m_f \bar{g}$$

$$\bar{F}'_v = m_c \bar{g}$$

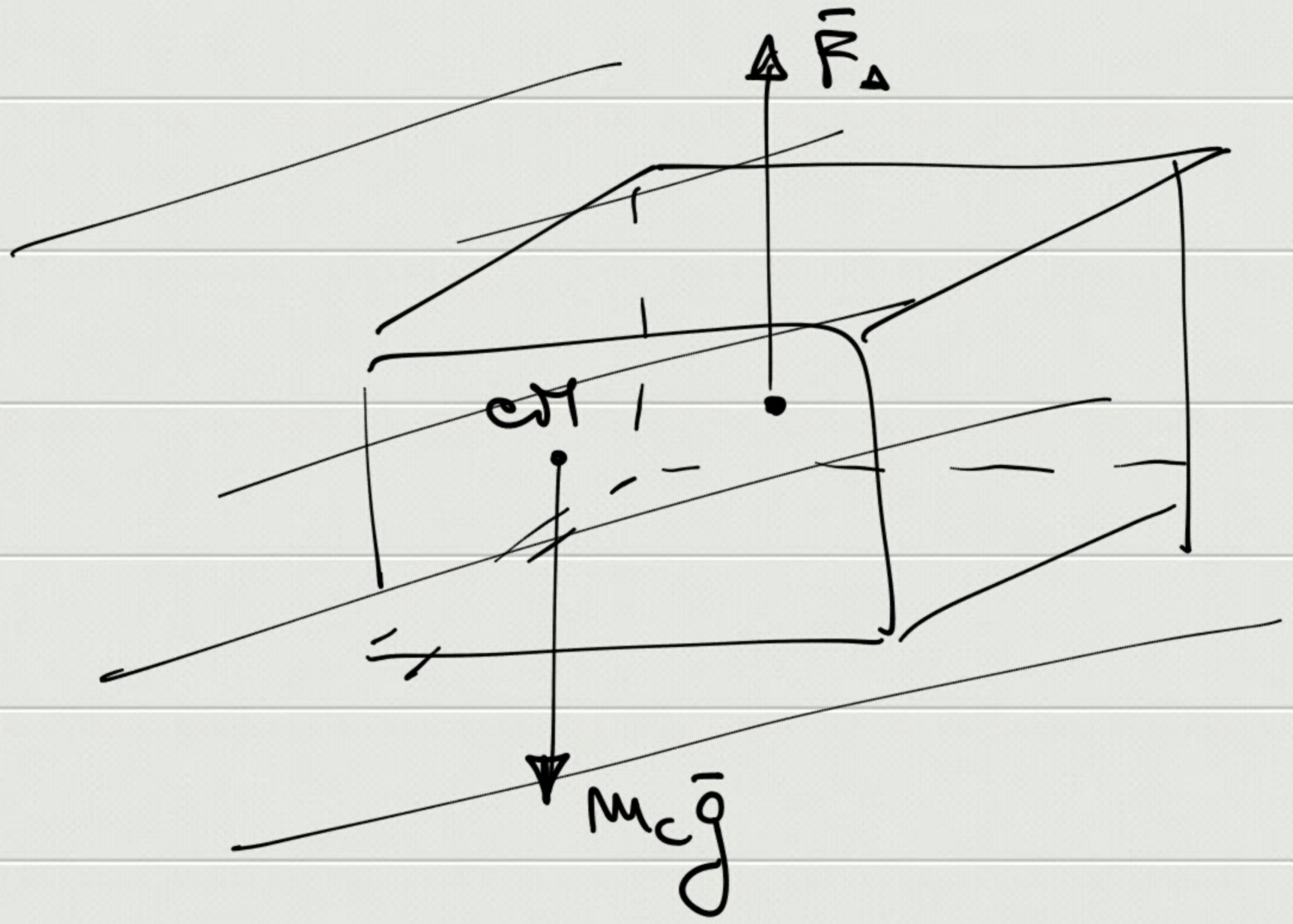
$$\Rightarrow \boxed{-m_f \bar{g} + m_c \bar{g} = \bar{R}} \Rightarrow \bar{R} = (m_c - m_f)\bar{g}$$

$$m = \rho V \Rightarrow \boxed{\bar{R} = (\rho_c - \rho_f) V \bar{g}}$$

$$\rho_c > \rho_f \Rightarrow (\rho_c - \rho_f) > 0 \quad \bar{R} \downarrow$$

$$\rho_c < \rho_f \Rightarrow (\rho_c - \rho_f) < 0 \quad \bar{R} \uparrow$$

$$\bar{R} = m_c \bar{g} + \bar{F}_A \qquad \boxed{\bar{F}_A = -m_f \bar{g}}$$


$\bar{F}_A$
$m_c\bar{g}$