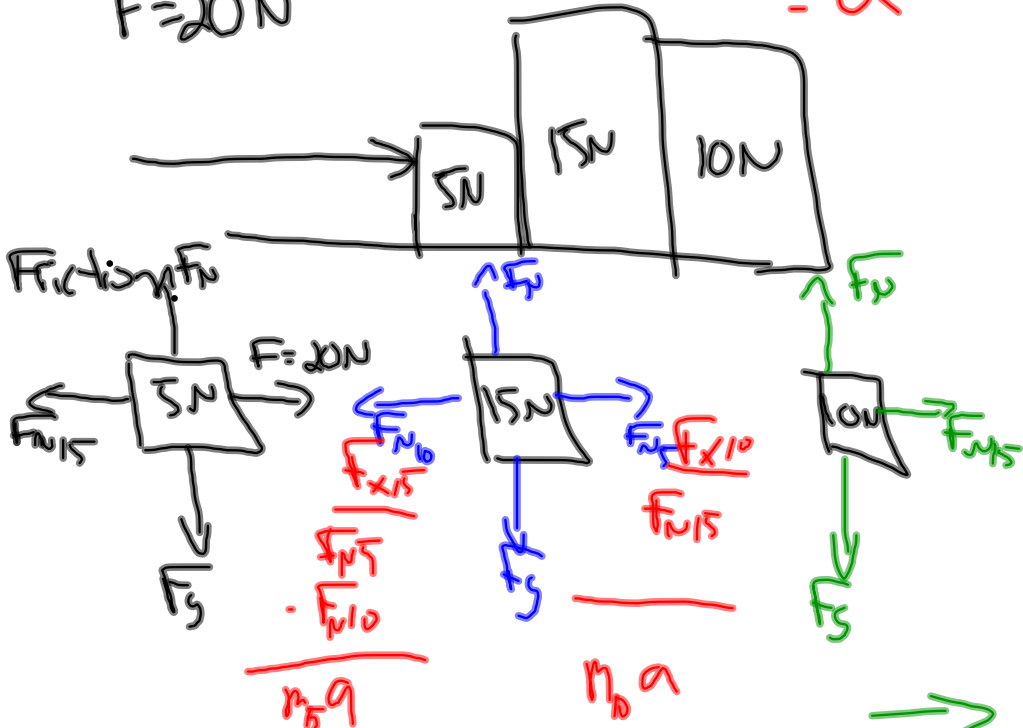


↑ +
→ +

$F = 20\text{N}$

$a_5 = a_{15} = a_{10} = a$

Neglect Friction F_f



$$\frac{F_{x5}}{m_5 a}$$

$$\frac{20 - F_{N15}}{5/9.81}$$

$$\frac{F_{N5} - F_{N10}}{m_5 a}$$

$$\frac{F_{N15}}{m_{10} a}$$

$3.33 \quad F_{N5} = 16.67\text{N} \quad F_{\text{net}} = 20\text{N}$

$$20 - F_{N5} = (5.09)a$$

$$F_{N5} - F_{N10} = (1.529)a$$

$$F_{N5} = (1.019)a = 6.66\text{N}$$

$$20\text{N} = \left(\frac{30\text{N}}{9.81}\right)a$$

$$\frac{20}{3.05} = \frac{3.05 a}{3.05}$$

$$a = 6.54\text{m/s}^2$$