

5.6. (a) The object with the largest mass accelerates the slowest, since $a = \frac{F}{m}$. Thus B has the largest mass.

(b) The object with the smallest mass accelerates the fastest, so C has the smallest mass.

(c) Since the same force is applied to both blocks,

$$F_A = F_B \Rightarrow m_A a_A = m_B a_B \Rightarrow \frac{m_A}{m_B} = \frac{a_B}{a_A} = \frac{3}{5}$$