Impulse and Momentum Summary

$$F_{ave}\Delta t \equiv I = p_f - p_i = \Delta p$$

● For single object….

➢ $F = 0 \Rightarrow$ momentum conserved $(\Delta p = 0)$

● For collection of objects …

➢ $\Sigma F_{ext} = 0 \Rightarrow$ total momentum conserved $(\Delta P_{tot} = 0)$

➢ $F_{ext} = m_{total}\, a$