

# Collisions

## **1 Impulse and momentum**

$$\text{Impulse} = mv - mu = Ft$$

Total momentum before collision = total momentum after

## **2 Coefficient of restitution**

This tells us how well something bounces, it is given the symbol  $e$ .

If  $e = 1$  the ball returns to its original height

If  $e = 0$  the ball doesn't bounce

$$e = \frac{\text{Speed of separation}}{\text{Speed of approach}}$$