Ex 6.4 p 165 $v_{1,2f}$

collisions elastic

before after

$m_1v_{1i} + m_2v_{2i} = m_1v_{1f} + m_2v_{2f}$ *

inelastic $m_1v_{1i} + m_2v_{2i} = (m_1+m_2)v_{1,2f}$ *

$m_1 = 1800kg$ $m_2 = 900kg$

$v_{1i} = 0$ $v_{2i} = 20\frac{m}{s}$

inelastic

before after

$m_1v_{1i}^{\,0} + m_2v_{2i} = (m_1+m_2)v_{1,2f}$?

$$\frac{m_2v_{2i}}{m_1+m_2} = v_{1,2f}$$

$$\frac{900(20)}{(1800+900)} = v_{1,2f}$$

$$6.7\frac{m}{s} = v_{1,2f}$$

momentum

$p = mv$ * $kg\cdot\frac{m}{s}$ #3

Ft Impulse

$N\cdot s$

$\Delta = f - i$

$Ft = \Delta p$

$Ft = mv_f - mv_i$

$Ft = m(v_f - v_i)$ * #6,10

mass in kg

V in $\frac{m}{s}$

F in N

t in s

#19,20