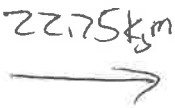
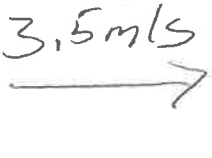
22.75 kgm/s $p = m \cdot v$



3.5 m/s



elastic

8.75 kgm/s

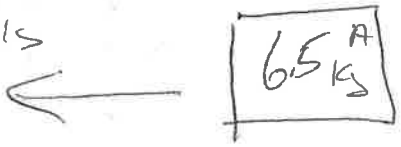
3.5 m/s

$p = 22.75 \text{ kgm/s}$

$m = 2.5 \text{ kg}$

$v =$

$p = 8.75 \text{ kgm/s}$



$\frac{p}{m} = \frac{m \cdot v}{m}$

$\frac{p}{m} = v$

inelastic

2.5 m/s

3.5 m/s

$p = m \cdot v$

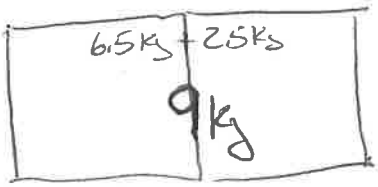
$16.25 = 6.5 \text{ kg} \cdot 2.5 \text{ m/s}$

$p = 16.25 \text{ kgm/s} \rightarrow$

$p = m \cdot v$

8.75 kgm/s $2.5 \text{ kg} \cdot 3.5 \text{ m/s}$

$p = 8.75 \text{ kgm/s} \leftarrow$



~~$p = 16.25$~~

$p = 16.25 \text{ kgm/s} - 8.75 \text{ kgm/s} = 7.5 \text{ kgm/s}$

$p = 7.5 \text{ kgm/s}$

$m = 9 \text{ kg}$

$v =$

$\frac{p}{m} = \frac{m \cdot v}{m}$

$\frac{7.5 \text{ kgm/s}}{9 \text{ kg}}$ $\frac{p}{m} = v$

$.83 \text{ m/s} =$

Elastic

$P = m \cdot v$

$10\,kg\,m/s = 1\,kg \cdot 10\,m/s$ →

10 m/s →

← 15 m/s

$P = m \cdot v$

$15\,kg\,m/s = 1\,kg \cdot 15\,m/s$

1 kg A

1 kg B

P

A

P = 15 kg m/s ←

m = 1 kg

V 15 m/s ←

$= \frac{15\,kg\,m/s}{1\,kg} = \frac{P}{m} = v$

$\frac{P = m \cdot v}{m \quad m}$

1 kg A

1 kg B

10 m/s →

P = 10 kg m/s →

m = 1

V = 10 m/s →

$10\,m/s = \frac{P = m \cdot v}{m \quad m} \quad \frac{10}{1} \quad \frac{P}{m} = v$

$P = m \cdot v$

$10\,kg\,m/s = 5\,kg \cdot 2\,m/s$ →

2 m/s →

5 kg A

← 8 m/s

inelastic

$P = m \cdot v$

$24\,kg\,m/s = 3\,kg \cdot 8\,m/s$ ←

3 kg B

Pof A = 10 kg m/s →

Pof + B −24 kg m/s

−14 kg m/s ←

5 kg A + 3 kg B

8 kg

P = −14 kg m/s

m = 8 kg

V = −6 m/s ←

$\frac{P = m \cdot v}{m \quad m}$

$= \frac{-14\,kg\,m/s}{8\,kg} \quad \frac{P}{m} = v$

---

1)

1.3 m/s →

2.1 kg

← .171 kg

6 m/s

$m \cdot v$ ○ + $m \cdot v$ ◎ ←

$2.1\,kg \cdot 1.3\,m/s + .71\,kg \times 6\,m/s$

$2.73\,kg\,m/s + (-1.26\,kg\,m/s)$

$-1.53\,kg\,m/s$ ←

$P_1 = P_2$

$m_1 \cdot v_1 = m_2 \cdot v_2$

So we need m·v for Both objects

2)

.7 m/s ←

2.1 kg

○ V?

.171 kg

$m \cdot v + m \cdot v$

$.7 \times 2.1 + .171\,kg \cdot V$

$1.47\,kg\,m/s + .171\,kg \cdot v$

$= 1.47\,kg\,m/s + .171\,kg \cdot V$