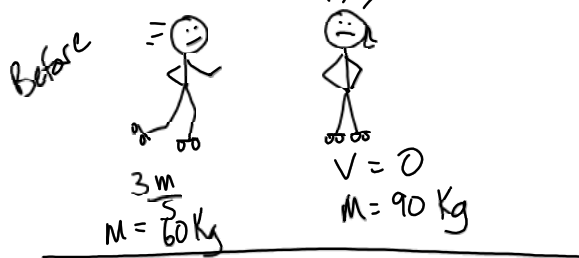


CP- Nov 17

A Romantic Problem! Velcro-Man (aka Hook) is roller skating at his frictionless roller rink at 3 m/s towards Velcro-Girl (aka Loop). She is waiting in one spot for her true love. If Velcro-Man has a mass of 60 kg and Velcro-Girl has a mass of 90 kg, what is their new speed together? ? ? ?



$$M_m V_m + M_w V_w = (M_m + M_w) V'$$

$$(60 \text{ kg}) \left( 3 \frac{m}{s} \right) + 0 = (60 + 90) V$$

$$\frac{180 \text{ kg} \cdot m}{s} = \frac{150 \text{ kg} V}{s}$$

$$1.2 \frac{m}{s} = V$$

