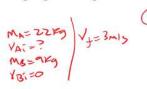
Page 12

Tuesday, December 18, 2018

11:18 AM

5. A dry cleaner throws a 2 kg bag of laundry onto a stationary 9 kg car. The cart and laundry bag begin moving at 3 m/s. Determine the speed with which the bag was thrown.



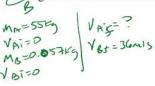
MA= 22kg Vj=3mly

MaY at + May = (Ma+Ma)V_f

Ma=akg (22kg)(Vai) = (22kg+9kg)(3mk)

17AT = 4.23 MIS

6. A tennis player places (55 kg ball machine on a frictionless surface. The machine fires a 0.057 kg tennis ball with a velocity of 36 m/s. How fast does the machine roll backwards?



MAX=0.057Kg VA;=?

MAX=0.057Kg VB;=36MIS

MAX=0.057Kg VB;=36MIS

-MAX=1 + MAXB;=MAX=1+MBVB;

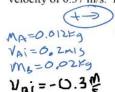
-MAX=1 + MAXB;=MAX=1+MBVB;

-MAX=1 + MAXB;=MAX=1+MBVB;

-MAX=0.057Kg X36MIS

VAS=-0.037MIS (B) (A)

7. A 0.012 g toy car moving at 0.2 m/s has a collision with a 0.02 kg toy car moving in the opposite direction at 0.3 m/s. After the collision, the 0.012 kg car moves backwards with a velocity of 0.37 m/s. Find the speed of the 0.02 kg car after the collision.



(+3) B > 6B | 60 B? $M_{A}=0.012Eg$ $V_{Ai}=0.2mis$ $V_{Ai}=0.2mis$ $V_{Bi}=0.02Eg$ $V_{Bi}=0.3m$ $V_{Bi}=0.03m$ $V_{Bi}=0.03m$ $V_{Bi}=0.03m$ $V_{Bi}=0.03m$ $V_{Bi}=0.03m$ $V_{Bi}=0.03m$

8. A Skerce skater moving with a velocity 2.5 m/s is holding a Daykg snowball. She throws the snowball forward with a velocity of 32 m/s. relative to the ground. What is the speed of the ice skater after throwing the snowball?

MA=G5KG

VAS=?

VAS=?

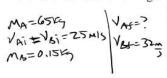
(MA+Ms) VAI=MANAS

(MA+Ms) VAI=MANAS

(G5Kg+0.15Kg)(2.5 m/s) = (G5Kg)(NAS) + (0.15Kg)(32m/s)

VAS= 2.43 m/s

Unit 6: Momentum and Impulse Page 12



Unit 6 pg 12

Work Pac...

Unit 6 - Momentum Page 1