

## Conservation of Momentum #2

Name \_\_\_\_\_

Video: [Fridge falling off a truck](#)

A 100 kg (220 lbs) fridge fell off of the truck. The fridge is traveling at - 5 m/s and hits your car which is traveling at 24.6 m/s (55 mph) . What is the final velocity of the car and fridge, if the fridge sticks to the hood of the car?  $m_1v_1 + m_2v_2 = (m_1 + m_2)v_f$

Givens

Work

Answer

The collision took place over 0.10 seconds. What was the force on the 1400 kg car?

$$F = \frac{m_{car}v_{car\ final} - m_{car}v_{car\ initial}}{t}$$

Givens

Work

Answer