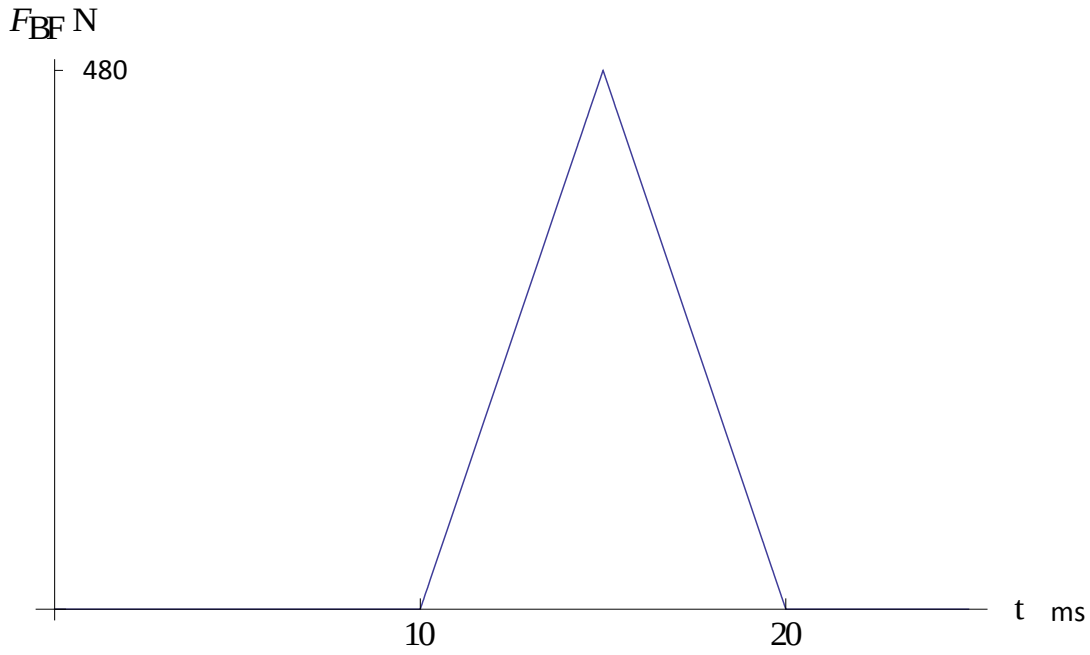
Momentum-Impulse examples

Example 1

A 200 g rubber ball is released from a height of 2.0 m. It collides with the floor and bounces back up. A graph of the force on the ball by the floor versus time is given below. Use the graph to find how high the ball rebounds.



Example 2

Write a realistic problem for which the following equation holds.

$$(1000\ kg)(2\ m/s) = (1000\ kg + 2000\ kg)\ v_f$$

Example 3

A 10 g bullet is fired into a 1 kg wood block, where it lodges. Subsequently the block slides 4.0 m across the wooden floor. What was the bullet speed just before it collided with the block? Take $\mu^k_{\text{wood on wood}} = 0.2$.