

What is the impulse and force on a 5.0 kg book that is dropped to the floor from a height of 12.0m if the time of impact is 0.10 s ?

$v_i = 0$
 $v_f = -AV$
 $v_f^2 = 0^2 + 2(9.8)(12)$
 $v_f = \sqrt{2(9.8)(12)}$
 $= -15.34 \text{ m/s}$

$J = m \Delta v$
 $J = (5 \text{ kg})(0 - (-15.34))$
 $J = +76.5 \text{ kg m/s}$

$F \cdot t = J$
 $F \cdot 0.1 = 76.5$
 $F = 765 \text{ N}$

Impulse on the book occurs after touch down.
notes it hits

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