Answer on Question #67622, Physics / Other

A FORCE OF 15 NEWTON ACT ON A BODY OF MASS 5 KG FOR 2 SECONDS .WHAT IS THE CHANGE IN VELOCITY OF THE BODY?

Solution:

The acceleration is

$$a = \frac{F}{m} = \frac{15\ N}{5\ kg} = 3\ \mathrm{m/s^2}$$

Also, the acceleration is given by

$$a = \frac{v_f - v_i}{t} = \frac{\Delta v}{t}$$

Thus, the change in velocity is

$$\Delta v = at = (3\ m/s^2) \times (2\ s) = 6\ m/s$$

Answer. $6\ m/s$