Answer on question # 75767, Physics / Othe

Question an athlete with mass of 77 kg performs a vertical jump. the net impulse acting, calculated from the intergration of the force time data is 280 newtons. calculate the take-off velocity of the athlete.

Solution The velocity can be found from change of the momentum:

$$\Delta p = mv$$

$$v = \frac{\Delta p}{m} = \frac{280}{77} \approx 3.64\, m/s$$