Question 31217

The body moves two seconds without initial velocity. The speed at moment t is in general $v(t)=v_0+gt$, where v_0 is the initial velocity (If body moves vertically, according to gravity it gets acceleration $g=9.81\frac{m}{s^2}$). Since the initial velocity of body is zero, using last formula, for moment of time $t=2$, obtain $v(2)=g\frac{m}{s^2}\cdot 2\,s=9.81\frac{m}{s^2}\cdot 2\,s=19.62\,m$. Hence, the height is 19.62m.