

At $t=0$, $\mathbf{a} = \mathbf{a}_0 + \mathbf{v}_0 t + \frac{1}{2} \mathbf{g} t^2$. $\mathbf{v}_0 = \mathbf{v}_0 + \mathbf{g} t$. $\mathbf{H} = \mathbf{H}_0 + \mathbf{g} t$. $\mathbf{L} = \mathbf{L}_0 + \mathbf{g} t$.
