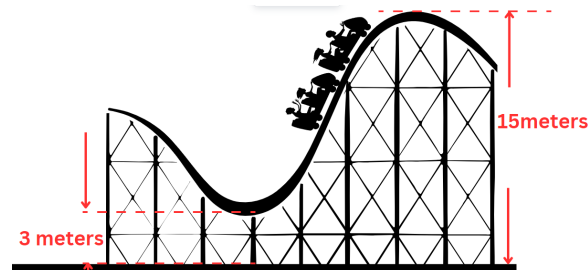# roller coaster

Question

A roller coaster cart has a mass of $\boldsymbol{m = 150kg}$. if at the lowest point on the path it has a kinetic energy of $\boldsymbol{T = 150kJ}$ what is the total energy at that point?

Using known expressions:
$U = \frac{1}{2}mv^2 + mgh$

Given:
$h = 3m$
$T = 150KJ$

$m = 1500kg$

Solution:
$U = 150,000 + 1500 * 3 * 9.81 = 194KJ$