






Total Energy of a Falling Ball

A ball, which has a mass of 1 kg, is dropped from a height of 78.4 meters. As it falls, its velocity for several heights is given below. Calculate the gravitational potential energy and the kinetic energy for each height that is given.

$$\text{GPE} = (m) \times (a_g) \times (h)$$

$$\text{KE} = (m) \times (v^2) / 2$$

$$a_g = 9.8 \text{ m/s}^2$$

	Height (m)	Velocity (m/s)	GPE (J)	KE (J)	Total Energy (GPE + KE)
	78.4	0			
	73.5	9.8			
	58.8	19.6			
	34.3	29.4			
	0	39.2			