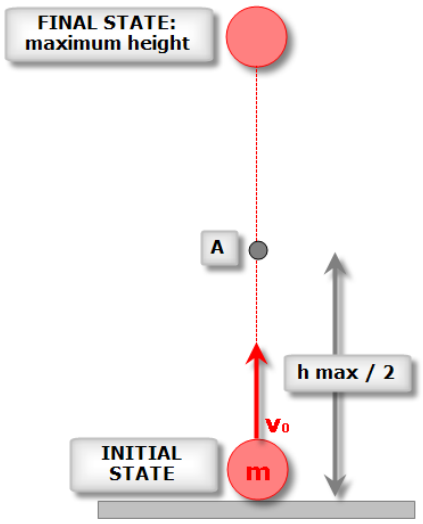
Conceptual Test: ENERGY



(neglect the friction force)

A ball is thrown upwards with an initial velocity of v_0. The mass of the ball is m.

From the sentences below, enclose those that are correct in your opinion and try to explain your reasons.

1	If we compare energies, we see that:		
• $\Delta PE = 0$ • $\Delta PE > 0$ • $\Delta PE < 0$	• $\Delta KE = 0$ • $\Delta KE > 0$ • $\Delta KE < 0$	• $\Delta KE + \Delta PE = 0$ • $\Delta KE + \Delta PE > 0$ • $\Delta KE + \Delta PE < 0$	

2	About the work done by the forces on that body we can say that	
• $W_{TOT} = 0$ • $W_{TOT} > 0$ • $W_{TOT} < 0$		• $W_{F,\ Ff} = 0$ • $W_{F,\ Ff} > 0$ • $W_{F,\ Ff} < 0$

3	When the body is at point "A" its potential energy is:
• $PE_A = PE_{final} / 2$ • $PE_A < PE_{final} / 2$ • $PE_A > PE_{final} / 2$ • We cannot relate both energies	

4	When the body is at point “A” its kinetic energy is:	
	• $KE_A = KE_{initial} / 2$ • $KE_A < KE_{initial} / 2$ • $KE_A > KE_{initial} / 2$	• $KE_A = PE_{final} / 2$ • $KE_A < PE_{final} / 2$ • $KE_A > PE_{final} / 2$

5	When the body is at point “A” its velocity is:
	• $v_A = v_0 / 2$ • $v_A < v_0 / 2$ • $v_A > v_0 / 2$