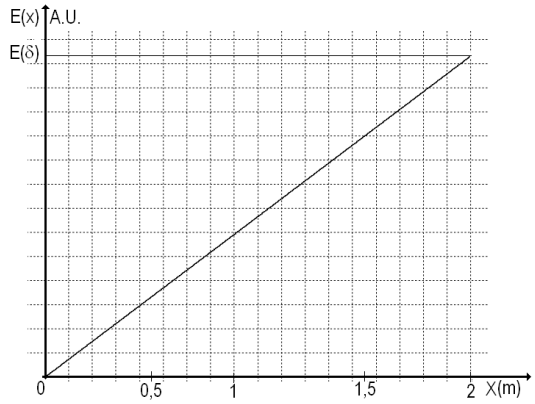
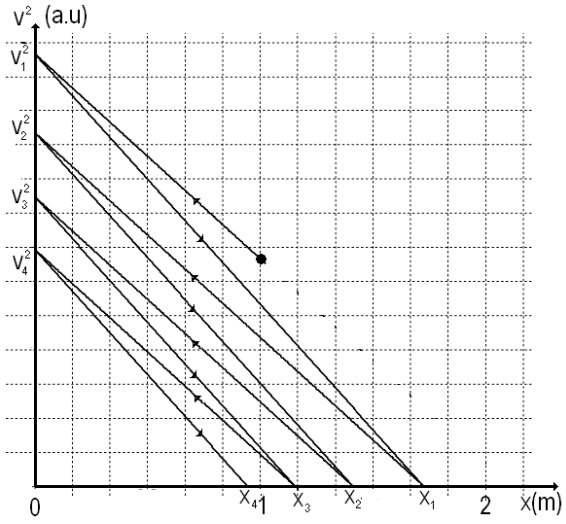
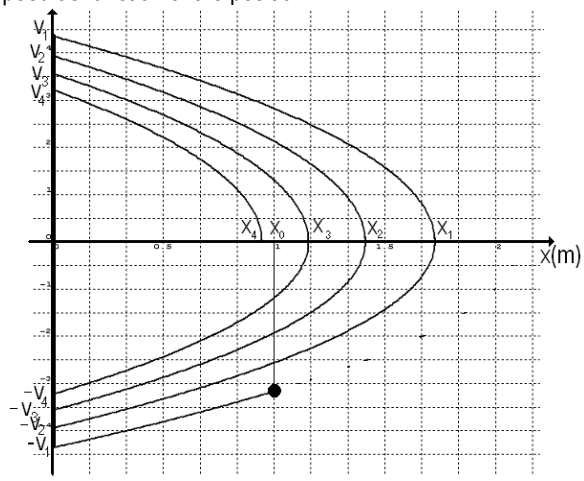
MARKING SCHEME FOR ANSWERS TO THE THEORETICAL QUESTION I

Part	MARKING SCHEME - THE THEORETICAL QUESTION I- JUMPING PARTICLE	Total Scores
I.a.	For: the distance D covered by the particle to the stop $\begin{cases} W(x_0) = D \cdot F_f \\ U(x_0) + E_c = D \cdot F_f \\ \lvert F_x \rvert \cdot x_0 + E_c = D \cdot F_f \end{cases}$ 1.00 p $D = \dfrac{\lvert F_x \rvert \cdot x_0 + E_c}{F_f}$ 0.50 p final result $D = 20m$ 0.50 p	**2.00 points**
I.b.	For: $U(x) = \lvert F_x \rvert \cdot x$ 1.00 p  1.00 p	**2.00 points**
I.c.	For : the evolution of the square of the speed as function of the position  1.00 p	**4.00 points**

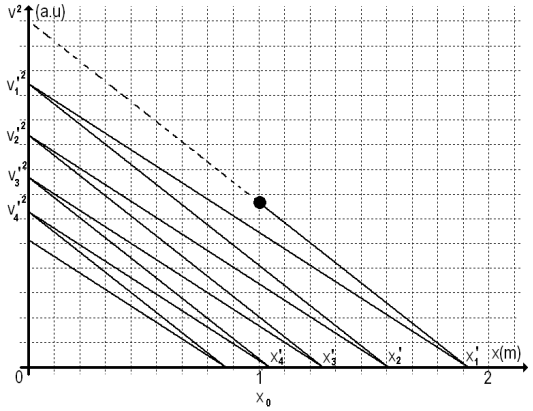
the evolution of the speed as function of the position



1.00 p

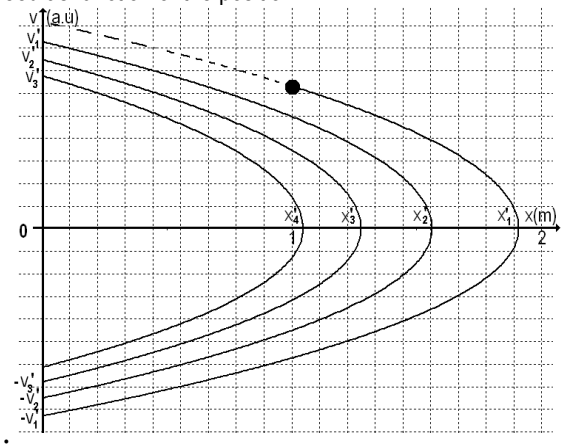
or

the evolution of the square of the speed as function of the position



1.00 p

the evolution of the speed as function of the position



1.00 p

Total score - theoretical question I	***8.00 points***

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