

Gr:	First Name:	
	Last Name:	
	N°	

TP-2 FREE FALL (CHUTE LIBRE)

Experiment

Record the results in Table 1.

$h_B (cm)$	80	70	60	50	40	30	20	10	0
$H = h_A - h_B (cm)$	0	10	20	30	40	50	60	70	80
$t (s)$	0								
	0								
	0								
$\bar{t} (s)$	0								
$\bar{t}^2 (s^2)$	0								
$g = 2H / \bar{t}^2 (m/s^2)$	9.81								
$v = \sqrt{2gH} (m/s)$	0								
$E_P(t) = m.g.h_B (joule)$									0
$E_C(t) = \frac{1}{2}mv^2 (joule)$	0								
$E_M (joules)$									

Table 1

1- Plot on graph paper the curve representing the function $H=f(t^2)$.

2- What is the nature of the motion?

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3- Deduce from the graph the experimental value of the acceleration due to gravity g.

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4- Compare this value with the theoretical one; provide commentary.

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Note: Plot the graphs on millimeter paper (A4 format).

