Module: TP of Physics 1 Year 2023-2024

Gr:	First Name :	
	Last Name :	
	N°	

TP-5 Inclined plane Part 2

Experiment 1 Determination of « g »

1. The results obtained are presented in the following table:

X(m)	0,50						
a (°)	5	10	15	20	25	30	
t (s)							
t ² (s)							
x/t^2 (ms ⁻²)							
Sin(a)							

Table 1

2. Plot the graph $\frac{x}{t^2}$ as a function of $\sin \alpha$, on graph paper.

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3.	The obtained curve is a straight line passing through the origin: $\Box$ <i>true</i> $\Box$ <i>false</i> If it's true, calculate its slope $P_e$ .
4.	Theoretical demonstration of the formula: $\frac{x}{t^2} = \frac{g}{2} \cdot \sin(\alpha)$
5.	Determination of the value of <b>g</b> .
	Experiment 2 Mass in equilibrium on an inclined plane
A susp	with a mass $M_c = \dots g$ ended mass $M_s = \dots g$
2.	The angle $\alpha$ at which the cart is in a <b>state of equilibrium</b> is:  By applying the fundamental law of dynamics ( <b>L.F.D</b> ), demonstrate that at equilibrium, we have: $P_s = P_c \sin \alpha.$

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3. Ver	rification, using experimental data	a, that we have: $P_s = P_c \sin \alpha$ .	
	culate the value of the reaction <b>R</b> xtensible string.	on the inclined plane, as well as the	tension <b>T</b> in the
<b>5.</b> Cor	ıclusion		