Worksheet 3: 1D Kinematics (Part 2: Air Track)

Name: _____   **Due February 19, 2026**

Partner: _____   Pencil only: use of Pen is forbidden.

Diagram of apparatus used to compute θ.

Measurements & Calculations		
Parameter	**Unit**	**Measured Value**
d (air track "foot to foot")		$\pm$
h (height of wood block)		$\pm$
Video Frame Δt		$\pm$
Video Frame Rate		$\pm$
Angle of Inclination (θ)		
Expected Acceleration ($g\sin\theta$)		$\pm$

Calculations $(y = c_1 t^2 + c_2 t + c_3)$ $(v = c_4 t + c_5)$		
Parameter	**Unit**	**Result**
c_1		$\pm$
c_4		$\pm$
a from position plot		$\pm$
a from velocity plot		$\pm$

Discuss:

Discuss the quality and level of agreement of your three acceleration values.

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