Determining the relationship between hanging masses and the angle of a frictionless plane

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1 Introduction

1.1 Research Question

When the mass of an object on a frictionless plane is altered, and the mass of a hanging object adjusted so equilibrium is achieved, Can this be used to find the angle of the plane?

1.2 Rationale

1.2.1 Hypothesis

1.3 Methodology

1.3.1 Modifications

1.3.2 Materials

- Angle gun

- Frictionless plane

- Brass weights

- Blue tack

- Scale

- Carriage

1.3.3 Method

1. Set up slope at a constant angle. It will remain at this angle for the entire duration of the experiment.

2. Set the hanging mass for the respective set of trials (m_2).

3. Alter the cart mass (m_1) until equilibrium with m_2 is achieved.

4. Measure m_1 and m_2

5. Repeat for set number of trials and m_2 values.

1.3.4 Risk Assessment

2 Results and Evaluation

2.1 Results

2.2 Discussion

3 Conclusion