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Pendulum Lab

Purpose: The purpose of this lab was to find “g” which is gravity, by using the equation T=2π(I/mgd)^(1/2). In order for this to occur, we graphed the equation and made it easier to calculate “g”.

Materials: Calculator, photogate, 2 clamps, meter stick, modeling clay, building blocks, paper clip, and a motion detector.

Data:

|  |  |
| --- | --- |
| T^2(s^2) | 1/12 + d^2 (m) |
| 2.8224 | 0.7055 |
| 2.3746 | 0.5833 |
| 2.6896 | 0.6666 |

Graph:

Conclusion:

g = 4π^2 / 3.7815 = 10.43988 m/s^2

We got 10.4 as our g when the normal g is 9.8. Our percent error is 6.428%.