**Unit 5 Factors Affecting Speed of a Pendulum**

**Data Collection**

**Diagram of pendulum equipment.**

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| **Part A: Effect of Mass of Pendulum on Speed of Pendulum** |
| **Table 1 – Effect of Mass of Pendulum on Speed of Pendulum**  **Constant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;**  **Constant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Trial** | **Rep.** | **Mass**  ***m***  **(g)** | **Speed**  ***v***  **(m/s)** |  |  |  | | **1** | **1** |  |  |  |  |  | | **1** | **2** |  |  |  |  |  | | **1** | **3** |  |  |  |  |  | | **1** | **Avg.** |  |  |  |  |  | | **2** | **1** |  |  |  |  |  | | **2** | **2** |  |  |  |  |  | | **2** | **3** |  |  |  |  |  | | **2** | **Avg.** |  |  |  |  |  | | **3** | **1** |  |  |  |  |  | | **3** | **2** |  |  |  |  |  | | **3** | **3** |  |  |  |  |  | | **3** | **Avg.** |  |  |  |  |  | | **4** | **1** |  |  |  |  |  | | **4** | **2** |  |  |  |  |  | | **4** | **3** |  |  |  |  |  | | **4** | **Avg.** |  |  |  |  |  | |

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| **Part B: Effect of Height of Pendulum on Speed of Pendulum** |
| **Table 2 – Effect of Height of Pendulum on Speed of Pendulum**  **Constant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;**  **Constant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Trial** | **Rep.** | **Height**  ***h***  **(cm)** | **Speed**  ***v***  **(m/s)** |  |  |  | | **1** | **1** |  |  |  |  |  | | **1** | **2** |  |  |  |  |  | | **1** | **3** |  |  |  |  |  | | **1** | **Avg.** |  |  |  |  |  | | **2** | **1** |  |  |  |  |  | | **2** | **2** |  |  |  |  |  | | **2** | **3** |  |  |  |  |  | | **2** | **Avg.** |  |  |  |  |  | | **3** | **1** |  |  |  |  |  | | **3** | **2** |  |  |  |  |  | | **3** | **3** |  |  |  |  |  | | **3** | **Avg.** |  |  |  |  |  | | **4** | **1** |  |  |  |  |  | | **4** | **2** |  |  |  |  |  | | **4** | **3** |  |  |  |  |  | | **4** | **Avg.** |  |  |  |  |  | |

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| **Part C: Effect of Length of Pendulum on Speed of Pendulum** |
| **Table 3 – Effect of Length of Pendulum on Speed of Pendulum**  **Constant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;**  **Constant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Trial** | **Rep.** | **Mass**  ***m***  **(g)** | **Speed**  ***v***  **(m/s)** |  |  |  | | **1** | **1** |  |  |  |  |  | | **1** | **2** |  |  |  |  |  | | **1** | **3** |  |  |  |  |  | | **1** | **Avg.** |  |  |  |  |  | | **2** | **1** |  |  |  |  |  | | **2** | **2** |  |  |  |  |  | | **2** | **3** |  |  |  |  |  | | **2** | **Avg.** |  |  |  |  |  | | **3** | **1** |  |  |  |  |  | | **3** | **2** |  |  |  |  |  | | **3** | **3** |  |  |  |  |  | | **3** | **Avg.** |  |  |  |  |  | | **4** | **1** |  |  |  |  |  | | **4** | **2** |  |  |  |  |  | | **4** | **3** |  |  |  |  |  | | **4** | **Avg.** |  |  |  |  |  | |