**Unit 6 Factors Affecting Static Pressure Head**

**Data Collection**

[**Fluid Pressure in a Reservoir**](https://www.geogebra.org/m/MK7KhgSh)

**https://www.geogebra.org/m/MK7KhgSh**

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| **Part A: Effect of Depth Below Surface on Static Pressure Head** |
| **Table 1 – Effect of Depth Below Surface on Static Pressure Head**  **Constant *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* = \_\_\_\_\_\_\_\_\_\_;**  **Constant \_*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*\_\_ = \_\_\_\_\_\_\_\_\_\_;**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Trial** | **Rep.** | **Depth Below Surface**  ***m***  **(h)** | **Gauge**  **Pressure**  ***P***  **(Pa)** |  |  |  | | **1** | **1** |  |  |  |  |  | | **2** | **1** |  |  |  |  |  | | **3** | **1** |  |  |  |  |  | | **4** | **1** |  |  |  |  |  | | **5** | **1** |  |  |  |  |  | | **6** | **1** |  |  |  |  |  | | **7** | **1** |  |  |  |  |  | | **8** | **1** |  |  |  |  |  | | **9** | **1** |  |  |  |  |  | | **10** | **1** |  |  |  |  |  | |

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| **Part B: Effect of Density on Static Pressure Head** |
| **Table 2 – Effect of Density on Static Pressure Head**  **Constant *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* = \_\_\_\_\_\_\_\_\_\_;**  **Constant \_*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*\_\_ = \_\_\_\_\_\_\_\_\_\_;**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Trial** | **Rep.** | **Density**    ***ρ***  **(kg/m3)** | **Gauge**  **Pressure**  ***P***  **(Pa)** |  |  |  | | **1** | **1** |  |  |  |  |  | | **2** | **1** |  |  |  |  |  | | **3** | **1** |  |  |  |  |  | | **4** | **1** |  |  |  |  |  | | **5** | **1** |  |  |  |  |  | | **6** | **1** |  |  |  |  |  | | **7** | **1** |  |  |  |  |  | | **8** | **1** |  |  |  |  |  | | **9** | **1** |  |  |  |  |  | | **10** | **1** |  |  |  |  |  | |

[**Flow Rate from Beverage Dispenser Lab**](https://www.thephysicsaviary.com/Physics/Programs/Labs/FlowRateFromBeverageDispenserLab/index.html)

[**https://www.thephysicsaviary.com/Physics/Programs/Labs/FlowRateFromBeverageDispenserLab/index.html**](https://www.thephysicsaviary.com/Physics/Programs/Labs/FlowRateFromBeverageDispenserLab/index.html)

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| **Part C: Effect of Acceleration Due to Gravity on Static Pressure Head** |
| **Table 3 – Effect of Acceleration Due to Gravity on Static Pressure Head**  **Constant *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* = \_\_\_\_\_\_\_\_\_\_;**  **Constant \_*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*\_\_ = \_\_\_\_\_\_\_\_\_\_;**  **Constant *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* = \_\_\_\_\_\_\_\_\_\_;**  **Constant \_*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*\_\_ = \_\_\_\_\_\_\_\_\_\_;**  **Constant *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* = \_\_\_\_\_\_\_\_\_\_;**  **Constant \_*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*\_\_ = \_\_\_\_\_\_\_\_\_\_;**  **Constant *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* = \_\_\_\_\_\_\_\_\_\_;**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Trial** | **Rep.** | **Acceleration**  **Due to Gravity**  **g**  **(m/s2)** | **Time**  **Interval**  ***Δt***  **(s)** | **Flow Rate**  ***Q***  **(m3/s)** | **Gauge**  **Pressure**  ***P***  **(Pa)** |  | | **1** | **1** |  |  |  |  |  | | **2** | **1** |  |  |  |  |  | | **3** | **1** |  |  |  |  |  | | **4** | **1** |  |  |  |  |  | | **5** | **1** |  |  |  |  |  | | **6** | **1** |  |  |  |  |  | | **7** | **1** |  |  |  |  |  | | **8** | **1** |  |  |  |  |  | | **9** | **1** |  |  |  |  |  | | **10** | **1** |  |  |  |  |  | |

**Sample Calculation for Table 3 Flow Rate from Trial 1 Repetition 1**

**Sample Calculation for Table 3 Pressure from Trial 1 Repetition 1**