### REPORT LAB 1:

### DETERMINING DENSITY OF RIGID OBJECTS

| Class: …….…. / Group: ……Team:………. | Lecturer’s comment |
| --- | --- |
| Full name:  1) ………………………………………......  2) ………………………………………......  3) ………………………………………......  4) ………………………………………......  5) ………………………………………...... |  |

**I. Aims/Purposes**

.................................................................................................................

.................................................................................................................

**II. Apparatus, Methods, and Procedure**

.................................................................................................................

.................................................................................................................

**III. Equations**

.................................................................................................................

.................................................................................................................

**IV. Experimental data**

| **Table 1:** Accuracy of Vernier caliper: ....................... (*mm*) | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | *D*  (10-3 *m*) | Δ*D*  (10-3 *m*) | *d*  (10-3 *m*) | Δ*d*  (10-3 *m*) | *h*  (10-3 *m*) | Δ*h*  (10-3 *m*) |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| Avg. |  |  |  |  |  |  |

| **Table 2:** Accuracy of Vernier caliper: ....................... (*mm*) | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | *a*  (10-3 *m*) | Δ*a*  (10-3 *m*) | *b*  (10-3 *m*) | Δ*b*  (10-3 *m*) | *c*  (10-3 *m*) | Δ*c*  (10-3 *m*) |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| Avg. |  |  |  |  |  |  |

| **Table 3:** Accuracy of Vernier caliper: ....................... (*mm*) | | | | |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | Average |
| (10-3 *m*) |  |  |  | ***=****...............*(10-3 *m*) |
| (10-3 *m*) |  |  |  | **=**..............(10-3 *m*) |

| **Table 4:** The mass of the ring, the cube, and the ball | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | Accuracy of technical balance: …………………..(*g*) | | | | | |
|  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| Avg. |  |  |  |  |  |  |

**V. Calculations**

***V.1 Calculating the absolute errors of the measurement of dimensions***

***V.2 Calculating the total absolute errors of the measurement of mass m***

***V.3 Calculating the density of rigid objects***

***(***and )

and

=>

Thus,

=>

**VI. Conclusion**