PHYS 201 LAB Measurement of density

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Time:\_\_\_\_\_\_\_\_\_\_\_\_

Partner(s):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A. Introduction of measuring devices

1) Vernier caliper

Read the following Vernier readings:

  

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) Micrometer

Read the following micrometer readings:



\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B: Rectangular Solids

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | Mass | Length | Width | Height |
| Al | - | - | - | - |
| Cu | - | - | - | - |
| Fe | - | - | - | - |
| Brass | - | - | - | - |
| Sheet metal | - | - | - | - |
| Acrylic block | - | - | - | - |

For Al, calculate the %uncertainty in density:

C. Cylinders

|  |  |  |  |
| --- | --- | --- | --- |
| Cylinder | Mass | Height, h | Diameter, d |
| Al |  |  |  |
| Steel |  |  |  |
| Cu |  |  |  |
| Brass |  |  |  |
| Fe |  |  |  |
| Wood |  |  |  |
| Acrylic  |  |  |  |
| Cu wire |  |  |  |
| Penny | Year: |  |  |  |

Use this [penny composition](https://en.wikipedia.org/wiki/Penny_%28United_States_coin%29) website to calculate an accepted density for your penny. Show your work below:

D. Average Density of H2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and CuSO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_from graph.