Name $\qquad$

In this activity you will calculate the length of each part based on the weight.

1. Weigh each part and record the weight below.
2. Use the volume formula given to calculate what the length should be. Record your answer in decimal form. Then convert to the nearest $16^{\text {th }}$ of an inch. (Hint: Think about what your units used in the formula should be. Use that the density of aluminum is $0.098 \mathrm{lb} / \mathrm{cu}$ in which means $0.098 \mathrm{lb}=1 \mathrm{cu} \mathrm{in})$.
3. Use a ruler to verify your length.

Volume of a cylinder: $V=\pi r^{2} l$

| Part | Diameter | 1.Weight | 2. Calculated Length <br> (Three decimal places) | 2. Calculated Length <br> (To the nearest $16^{\text {th }}$ ) | 3. Measured Length <br> (To the nearest $16^{\text {th }}$ ) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | $1^{\prime \prime}$ |  |  |  |  |
| B | $\frac{1}{2} "$ |  |  |  |  |

Volume of a rectangular solid: $V=l w h$

| Part | width | height | 1.Weight | 2. Calculated Length (Three decimal places) | 2. Calculated Length (To the nearest $16^{\text {th }}$ ) | 3.Measured Length (To the nearest $16^{\text {th }}$ ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | $\frac{3}{8}$ | $\frac{3}{8 \prime \prime}$ |  |  |  |  |
| B | $\frac{1}{2}{ }^{\prime \prime}$ | $\frac{3}{4}$ |  |  |  |  |

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