**ENED 1100 – Fall 2022**

**HW 8.1: Measurements and Estimations**

**Task 2 Answer Sheet**

**Task 2a.)** Calculate the volume for each sample, displaying to the answer to the correct significant figures. You can model the brat as a cylinder.

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| **Sample** | **Weight (oz.)** | **Length (in.)** | **Diameter (in.)** | **Volume (in^3)** |
| 1 | 2.733 | 6.474 | 1.302 | 8.620 |
| 2 | 2.720 | 6.460 | 1.299 | 8.561 |
| 3 | 2.770 | 6.196 | 1.296 | 8.174 |

**Show Calculation for one of the samples:**

**Sample 1: (pi)\*r^2\*h**

**(pi)\*(1.302/2)^2\*6.474**

**V = 8.61955 in^3**

**Task 2b.)** What process parameter appears to vary the most, leading to an inconsistent product?

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| The length is the most varying process prarameter, leading to an inconsistent product. |

**Task 2c.)** After signing and submitting your report for the FDA documentation, you notice that the weight scale calibration date expired the week before. What actions, if any, should you take?

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| I should alert the FDA about the error in measurements, then recalibrate the measurement tools, remeasure the required parameters, then send in a new report for the FDA documentation. |