1. For **each material**
    a. One plot containing
        i. Stress Strain Curve (For grips and extensometer data)
        ii. 0.2% offset line
        iii. Error bars
        iv. True Stress Strain
        v. Ultimate, Yield (For grips and extensometer data), Rupture, and True Rupture points
    b. Organized table(s) containing:
        i. All lab measurements w/ uncertainties
        ii. Published densities of all materials
        iii. Ultimate Stress and Strain w/ uncertainties
        iv. Rupture Stress and Strain w/ uncertainties
        v. True Rupture stress and strain w/ uncertainties*
        vi. Yield Stress and Strain w/ uncertainties (For grips and extensometer data)*
        vii. Young's Modulus w/ uncertainty(For grips and extensometer data)*
        viii. Modulus of Toughness w/ uncertainty +
        ix. Modulus of Resilience w/ uncertainty (For grips and extensometer data)* +
        x. Percent Area reduction w/ uncertainty
        xi. Poisson Ratio w/ uncertainty
        xii. Percent elongation w/ uncertainty
        xiii. Brinell Hardness **
        xiv. Percent difference from published values for:
            1. Ultimate Stress and Strain
            2. Rupture Stress and Strain
            3. Yield Stress and Strain(For grips and extensometer data)*
            4. Young's Modulus (For grips and extensometer data)*
            5. Poisson Ratio
2. For **both metals**
    a. One plot containing
        i. Stress strain curve of both materials (Just grips)
        ii. Error bars of both materials
        iii. True stress strain curves of both materials
    b. Organized table(s) containing
        i. Ultimate Stress and Strain of both materials w/ uncertainties
        ii. Rupture Stress and Strain of both materials w/ uncertainties
        iii. True Rupture stress and strain of both materials w/ uncertainties
        iv. Yield Stress and Strain of both materials w/ uncertainties (just extensometer)
        v. Young's Modulus of both materials w/ uncertainty (just extensometer)

        vi. Modulus of Toughness of both materials w/ uncertainty
        vii. Modulus of Resilience of both materials w/ uncertainty (just extensometer)
        viii. Percent Area reduction of both materials w/ uncertainty
    c. Several (5 or more) meaningful comparisons that can be made between these materials
        i. For example "*Material A* has a higher *Property 1* value meaning it would be more appropriate for *engineering application X* than *Material B* would be."
3. For **both Carbon Fiber Samples**
    a. One plot containing
        i. Stress strain curve of both materials
        ii. Error bars of both materials
    b. Organized table(s) containing
        i. Ultimate Stress and Strain of both materials w/ uncertainties
        ii. Rupture Stress and Strain of both materials w/ uncertainties
        iii. Modulus of Toughness of both materials w/ uncertainty
    c. Several (5 or more) meaningful comparisons that can be made between these materials
        i. For example "*Material A* has a higher *Property 1* value meaning it would be more appropriate for *engineering application X* than *Material B* would be."
4. For **plastic and one other material**
    a. One plot containing
        i. Stress strain curve of both materials
        ii. Error bars of both materials
    b. Organized table(s) containing
        i. Ultimate Stress and Strain of both materials w/ uncertainties
        ii. Rupture Stress and Strain of both materials w/ uncertainties
        iii. Modulus of Toughness of both materials w/ uncertainty
    c. Several (5 or more) meaningful comparisons that can be made between these materials
        i. For example "*Material A* has a higher *Property 1* value meaning it would be more appropriate for *engineering application X* than *Material B* would be."
5. For **all of the materials together**
    a. 1 plot containing
        i. Stress Strain curves (just grips)
        ii. Error bars
    b. 1 Fact about each material that cannot be determined from these plots alone
        i. For example (price per pound, Electrical Conductivity, Heat conductivity, etc.)

*- For Steel, Aluminum, and Carbon Fiber

**- For Steel only

+ - Trapezoidal integration must be used for the integrals unless you come up with a valid reason to use another numerical integration scheme