Name:_____   **Date:**_____

Partner:_____

> Do not change units.
> Do not use scientific notation for any answer.

Part I: Resistors: one from each of three adjacent bins.

$R_1 =$ _____ $\pm$ _____ Ω $R_2 =$ _____ $\pm$ _____ Ω $R_3 =$ _____ $\pm$ _____ Ω

$R_{series} =$ _____ $\pm$ ____ Ω $R_{series} =$ _____ $\pm$ ____ Ω $R_{series} =$ _____ $\pm$ ____ Ω
  (formula)   (ohmmeter)   (plot)

$R_{parallel} =$ _____ $\pm$ ____ Ω $R_{parallel} =$ _____ $\pm$ ____ Ω $R_{parallel} =$ _____ $\pm$ ____ Ω
  (formula)   (ohmmeter)   (plot)

Part II: Resistivity of Resistor material

Color band you chose: _____

Expected Resistance: $R_4 =$ _____ $\pm$ _____ Ω

Carbon paste for R_4: $L =$ _____ $\pm$ _____ mm $D =$ _____ $\pm$ _____ mm

$A =$ _____ $\pm$ _____ mm^2 $\rho =$ _____ $\pm$ _____ $\Omega \cdot$mm

Part II: Rheostat:

Rheostat Diameter: $D_R =$ _____ $\pm$ _____ mm

Number of loops (*n*) in 50 mm: _____ $\pm$ _____   (from tracing…)

Wire Diameter: $D =$ _____ $\pm$ _____ mm

Your plot results: $R = ($ _____ $\pm$ _____ $)(\Omega/m)\cdot x + ($ _____ $\pm$ _____ $)\Omega$

Resistivity from plot: $\rho =$ _____ $\pm$ _____ $\mu\Omega \cdot$mm