

**Prelab for PHYS222 Spring 2021 version**  
**Ohm's Law Odd version**

Name \_\_\_\_\_ Section \_\_\_\_\_

1. What is Ohm's Law? Give formula (define terms) and a qualitative explanation.
  
  
  
  
  
  
  
  
  
  
2. Draw an example of plot of an 'non-ohmic' devices? Be sure and include the units of the axes. See text or 'google' answer.
  
  
  
  
  
  
  
  
  
  
3. An ideal ammeter should have a resistance of \_\_\_\_\_
  
  
  
  
  
  
  
  
  
  
4. Considering your answer above explain and how an ammeter is connected, why this is a desirable attribute (for an ammeter)?
  
  
  
  
  
  
  
  
  
  
5. If I vs V is plotted and the result is a linear relationship, what value is obtained from the slope? Please note that we are using the relationship  $I=V/R$  (i.e., voltage is the independent variable and current is dependent variable).

If you obtained a slope of  $0.002 \text{ Ohms}^{-1}$  what is the value of the resistor?

**Bonus Points (20 points)**

Please take a survey on your attitudes about experimental physics course using this link:

[https://cuboulder.qualtrics.com/SE/?SID=SV\\_6JuNCKUUKAHarOu](https://cuboulder.qualtrics.com/SE/?SID=SV_6JuNCKUUKAHarOu)

The link will expire on **Wed, Feb 17**. Dr. Xiao will receive a list of participated students after the due date and will add bonus points to your Pre-Lab assignment for your participation. Report about survey responses will be fully anonymized, so your answers won't affect your course grade.