LAB REPORT : OHMS LAW

2 PARTS

PART I:

(i) Answer preliminary Question 5

(ii) answer analysis questions 1 to 6

↑ Light BULB Discussed BELOW

PART II = FORMAL LAB write up discussed LATER.

Part I

(i.) preliminary questions should be obvious.

(ii.) analysis questions:

(1.) What is y intercept? (did you calibrate?)

I = constant × current

↑ from graph

written twice: for each resistor.

(2.) Find percent error

$$\left| \frac{R_{exp} - R_{LABEL}}{R_{Label}} \right| \times 100\%$$

R_{exp} = experimental result(s)

$R_{Label} = 10\,\Omega$ OR $51\,\Omega$.

(3.) Check if R_{exp} is in range

Check:

$$R_{MIN} < R_{exp} < R_{MAX}$$

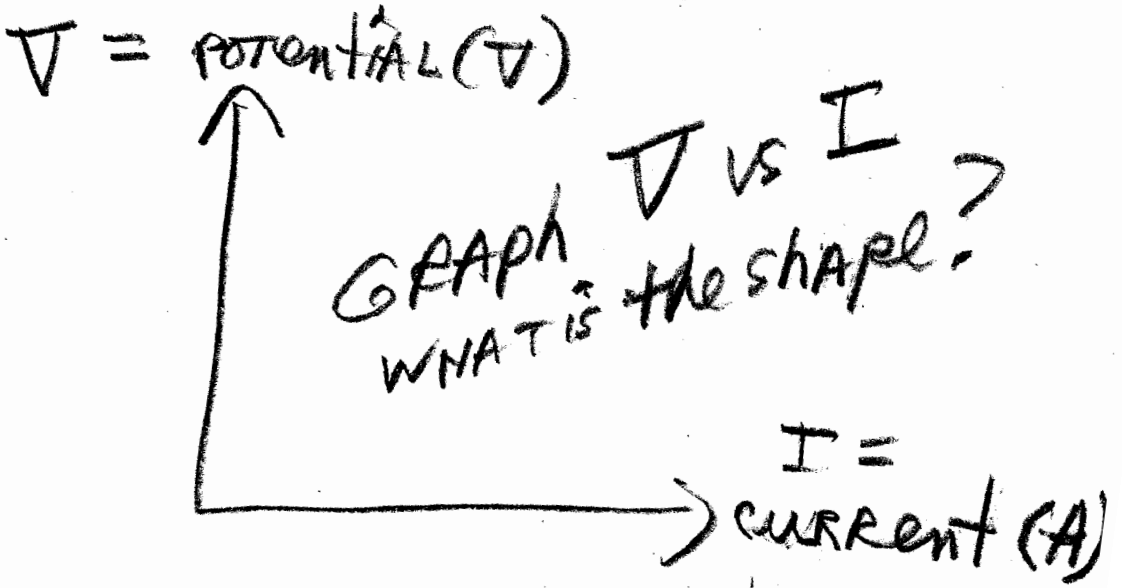
$$R_{MAX} = R_{Label} \cdot (1 + 0.05)$$

$$R_{MIN} = R_{Label} \cdot (1 - 0.05)$$

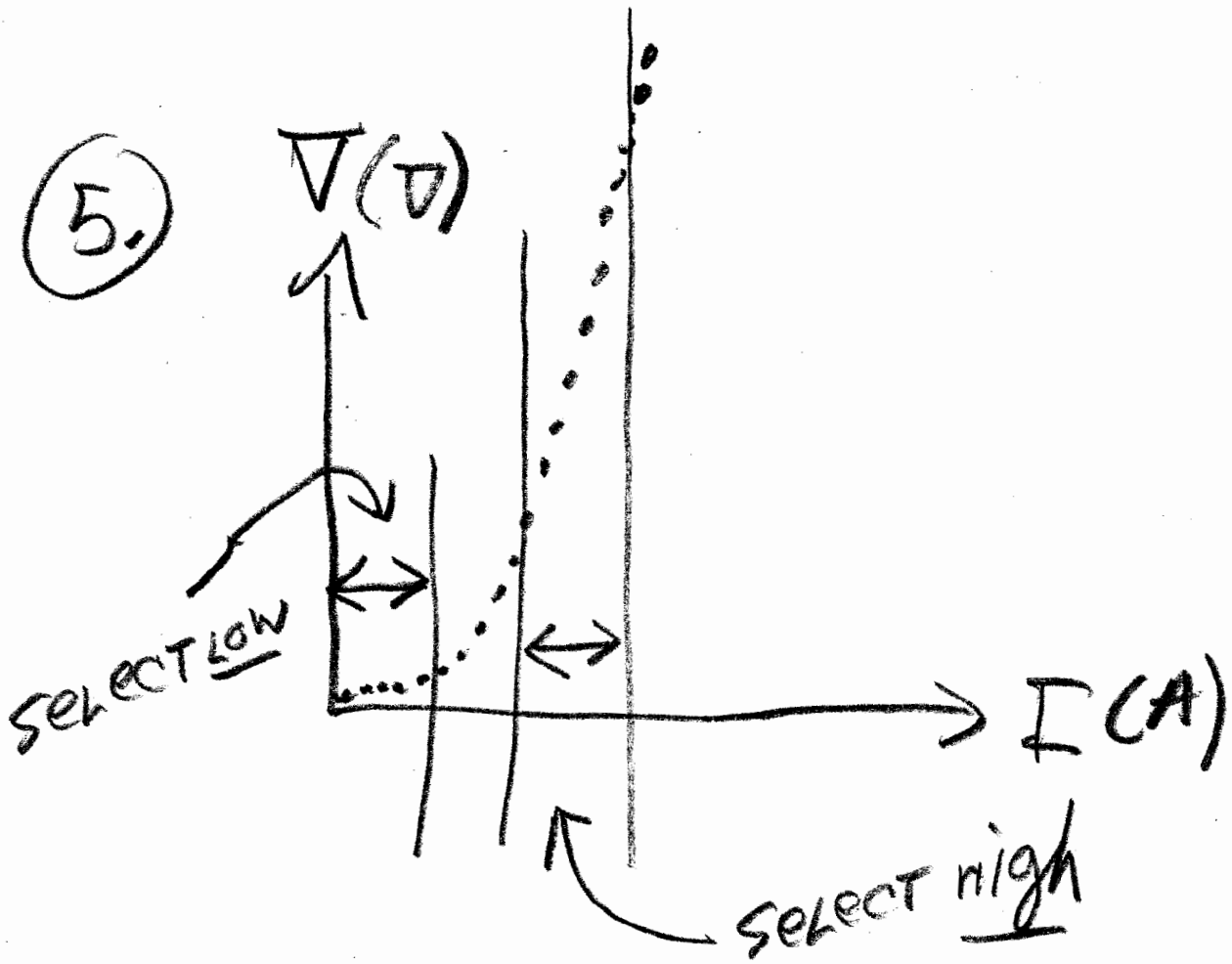
$R_{Label} = 10\,\Omega$ OR $51\,\Omega$

(4.) Do resistors follow ohms' LAW?

HINT: ohms LAW HAS a CERTAIN TYPE of graph relating potential and current.



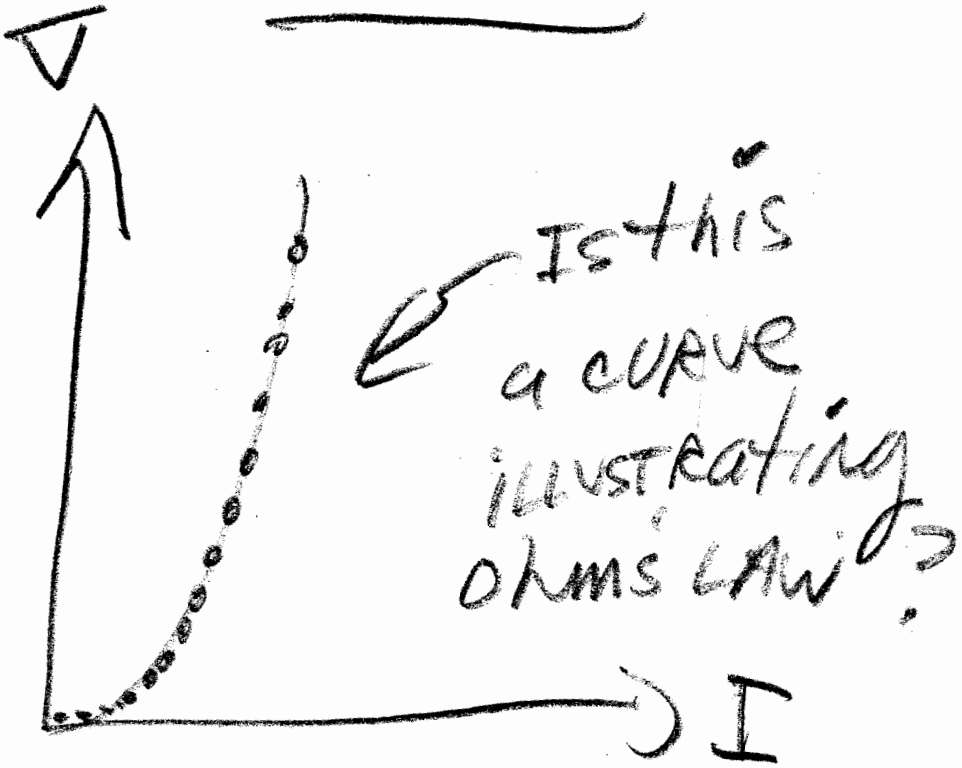
5.



SELECT LOW: CLICK Regression button and RECORD slope.

SELECT high: CLICK Regression button and RECORD SLOPE

(6) Does light BULB GRAPH display ohms LAW?



HINT: THE BULB HAS resistance. BUT does BULB obey ohms LAW?