Ohm's Law Quick key

prelim.

(5.)

Doubled → I doubled

$$I = \frac{V}{R}$$

OR

$$V = I \cdot R$$

ANALYSIS:

(1.) $10\,\Omega = 10.0\,\Omega$ **

$51\,\Omega = 5.1 \times 10'\Omega$

$V = 9.926 \cdot I$

$= 51.43 \cdot I$

(2) $\left| \frac{10.0 - 9.926}{\frac{10.0 + 9.926}{2}} \right| \times 100\%$

$= 0\%$

Since the numerator has no sig. figs.

** see (#3)

5% tolerance means MIN/MAX ARE:

$10.0 \pm (0.05)(10) = 10.0 \pm 0.5$

$= 9.5$ OR 10.5

OR:

$51 \pm (0.05)(51$

51 ± 2.55

$= 53.55 = (54\,\Omega)$

OR $48.45 = (48\,\Omega)$

FOR THE MAX/MIN.

(3.)

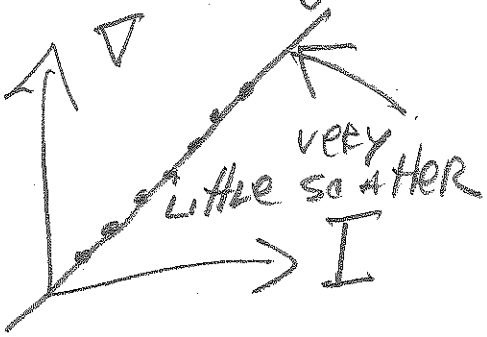
$9.5 < 9.926 < 10.5$,

TRUE.

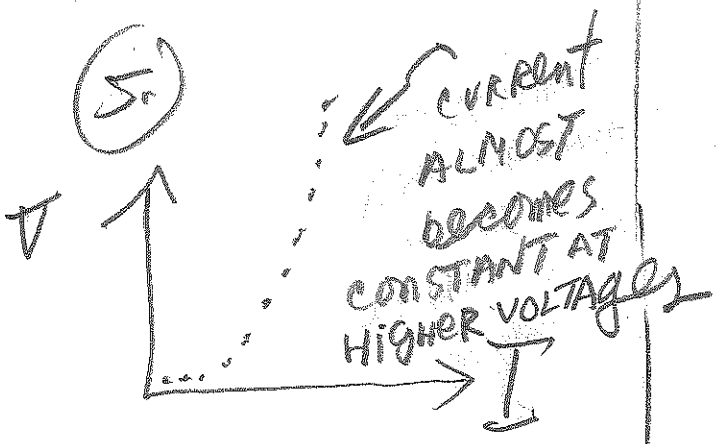
$48 < 51.43 < 54$,

TRUE.

4. yes, the line was straight within percent error ranges



5.



V

6. NO