Report:

I have measured currents that are given (R_1, R_2). They are same, where R_1 is equal to calculated currents and R_2 is approximately same to the calculated currents.

Since R_1 is lower resistance so the outcome is matched with given resistance. But R_2 is higher resistance so the potential energy (Volt) difference are more. This why R_2, calculated currents approximately same.

From the graph we can analysis that,

$$R_1 = \frac{\Delta V_1}{\Delta I_1} = \frac{6\,V}{6\,mA} = 1\,k\Omega$$

$$R_2 = \frac{\Delta V_1}{\Delta I_2} = \frac{10\,V}{9\,mA} = 1.11\,k\Omega$$

R_1 is lower resistant which show the greater slope. But R_2 is higher that give us a average slope.

This the thing I learnt from the expriment.