

From the experiment, we learned how to use a Wheatstone bridge to find the value of an unknown resistor and why this method is better than using Ohm's law. The ideal resistor of the ammeter has a very small value, close to zero. Similarly, we plotted a graph relating the division (d) on the scale to the corresponding measured value of potential difference ( $V_{com}$ ). Multiplying the division by the slope allowed us to determine the home voltmeter reading ( $V_{hm}$ ) and assess the error between  $V_{hm}$  and the measured value. We then plotted a graph correlating the division (d) on the scale with the corresponding ..reading on a commercial ammeter. The slope of the graph, denoted as  $K_A$ , was determined to be 0.045