Lab 7 – 4 Resistor Parallel Circuit

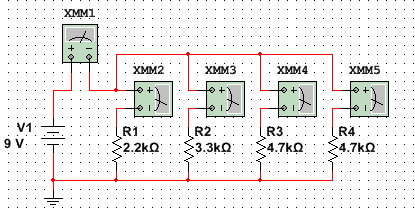
Names: ­­­­­­­­­­­­­­­­Seth Wills & Nathaniel Paulus

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The purpose of this lab is to:

Learn about parallel circuits

The voltage applied to 4 parallel resistors x is 9V. Measure all the resistor values, total current and all the branch currents.



Equipment needed:

1 – Digital Multimeter

1 – Elvis II

3 – Standard Resistors

|  |  |  |  |
| --- | --- | --- | --- |
|  | Measured | Calculated | Simulated |
| V1 = | 8.974V | 9.0V | 9.0V |
| RT = | 835Ω | 845.231Ω | 845.232Ω |
| I1 = | 3.8964mA | 4.09mA | 4.091mA |
| I2 = | 2.6753mA | 2.73mA | 2.727mA |
| I3 = | 1.8966mA | 1.91mA | 1.915mA |
| I4 = | 1.9070mA | 1.91mA | 1.915mA |
| IT = | 10.58mA | 10.65mA | 10.648mA |

|  |  |  |
| --- | --- | --- |
|  | Design | Measured |
| R1 = | 2.2k | 2.197k |
| R2 = | 3.3k | 3.246k |
| R3 = | 4.7k | 4.622k |
| R4 = | 4.7k | 4.597k |

Observations: As resistance increases, current decreases, if voltage stays constant.