# Vernier Data Analysis Worksheet

# **Data Overview Page 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Experiment | Emf  E [V] | Rext [Ω] | Time t1 [s] | Time t2 [s] |
| Batt 1 |  |  |  |  |
| Batt 2 |  |  |  |  |
| Batt 3 |  |  |  |  |
| Batt 4 |  |  |  |  |
| Batt 5 |  |  |  |  |
| Batt 6 |  |  |  |  |
| Batt 7 |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Experiment | Vext (t1)[V] | Vext (t2)[V] | %Vexternal remaining |
| Batt 1 |  |  |  |
| Batt 2 |  |  |  |
| Batt 3 |  |  |  |
| Batt 4 |  |  |  |
| Batt 5 |  |  |  |
| Batt 6 |  |  |  |
| Batt 7 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Experiment | I (t1) [mA] | I(t2) [mA] | %I remaining |
| Batt 1 |  |  |  |
| Batt 2 |  |  |  |
| Batt 3 |  |  |  |
| Batt 4 |  |  |  |
| Batt 5 |  |  |  |
| Batt 6 |  |  |  |
| Batt 7 |  |  |  |

\

# **Data Overview Page 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Experiment | Emf  E [V] | Resistance Rexternal [Ω] | Time t1 [s] | Time t2 [s] |
| Batt 1 |  |  |  |  |
| Batt 2 |  |  |  |  |
| Batt 3 |  |  |  |  |
| Batt 4 |  |  |  |  |
| Batt 5 |  |  |  |  |
| Batt 6 |  |  |  |  |
| Batt 7 |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Experiment | Vinternal (t1) [V]. | Vinternal (t2) [V] | Factor of increase Vint |
| Batt 1 |  |  |  |
| Batt 2 |  |  |  |
| Batt 3 |  |  |  |
| Batt 4 |  |  |  |
| Batt 5 |  |  |  |
| Batt 62 |  |  |  |
| Batt 7 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Experiment | rinternal (t1) [Ω] | rinternal (t2) [Ω] | Factor of increase rint |
| Batt 1 |  |  |  |
| Batt 2 |  |  |  |
| Batt 3 |  |  |  |
| Batt 4 |  |  |  |
| Batt 5 |  |  |  |
| Batt 6 |  |  |  |
| Batt 7 |  |  |  |

# **Data Overview Page 3**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Experiment | Emf  E [V] | Resistance  Rexternal [Ω] | Time t1 [s] | Time t2 [s] |
| Batt 1 |  |  |  |  |
| Batt 2 |  |  |  |  |
| Batt 3 |  |  |  |  |
| Batt 4 |  |  |  |  |
| Batt 5 |  |  |  |  |
| Batt 6 |  |  |  |  |
| Batt 7 |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Experiment | Etotal [J]  {Ptotal graph} | Eresistor [J]  {Presistor graph} | % of energy delivered |
| Batt 1 |  |  |  |
| Batt 2 |  |  |  |
| Batt 3 |  |  |  |
| Batt 4 |  |  |  |
| Batt 5 |  |  |  |
| Batt 6 |  |  |  |
| Batt 7 |  |  |  |

|  |  |  |
| --- | --- | --- |
| Experiment | Battery charge capacity [A\*s] | Battery charge capacity [mA\*h] |
| Batt 1 |  |  |
| Batt 2 |  |  |
| Batt 3 |  |  |
| Batt 4 |  |  |
| Batt 5 |  |  |
| Batt 6 |  |  |
| Batt 7 |  |  |