**Activity 01**: SI Units, Prefixes, Electrical Quantities

(Edit this document as needed, after you are done, convert to PDF and upload to Gradescope)

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SI Units**

Fill all the empty cells in the table below

|  |  |  |
| --- | --- | --- |
| **Quantity** | **Unit Name** | **Symbol** |
| Charge |  |  |
|  |  | A |
| Voltage |  |  |
| Resistance |  | Ω |
|  | farad | F |
| Inductance |  |  |
| Power |  |  |
|  |  | J |

**SI Prefixes**

Which of the three currents, *i1* = 45 μA, *i2* =0.03 mA and *i3* =25x10-4 A, is the largest?

Answer:

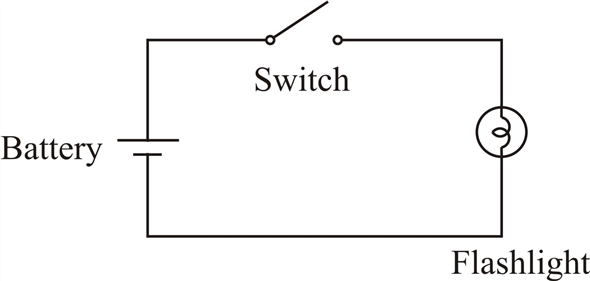
**Electrical Quantities**

Ten billion electrons per second pass through a particular circuit element. What is the average current in that circuit element? It is convenient to express your answer in nA.

Answer:

Explain, in a few sentences, how you would measure voltage across the flashlight bulb and current through the flashlight bulb in the circuit shown below? Which general instruments would you use? Use hand-drawn sketches (circuit diagrams) to pictorially represent how you would make connections to conduct these measurements.

*Hint*: Use the [DC measurements – Multimeters](https://youtu.be/NT6Fr3fY-L4) video linked here and the class website to answer this question.



Answer:

What is due on January 20th, 11:59 pm eastern on Gradescope?

1. This activity
2. Academic integrity and digital tools forms after signature