Problems & File Submission

Marks for every question is shown at the start of a question. Maximum attempts is stated right after the submit button.

1. You **need** to show your calculation by hand in a **pdf** (or image file if just 1 image). This is a fail safety since sometimes submission isn't properly completed.

2. The "Save" button just saves your answer for submitting later. So don't just save and forget to submit later. Press the "**Submit**" button after you've answered the result.

3. If you don't have a calculator, you can just google what you want to calculate (e.g. 3*10^8/(4*10^3)) and it will give ou the answer on google's page. You can also directly use write the mathematical expression in buX's numeric input box, and it'll check by evaluating your answer. So if I ask "what's 3 multiplied by 5?", you could write "15" as your answer, or you can write "3*5". This will actually work.

Numerical Input

3.0/3.0 points (graded)
Say, you have a conductor. When you apply a voltage difference of $\Delta V = 8.5\ \mathrm{V}$, you observe a current of $I = 4.5\ \mathrm{mA}$. What will be the resistance of that conductor? **(in Ohms)**

1888.889 ✔

1888.889

Submit You have used 2 of 3 attempts

Checkboxes

2.0/2.0 points (graded)

Ohm's law states that voltage difference across a resistor is current times resistance $\Delta V = IR$. So which of the followings are correct?

- [x] if you double the voltage difference, the current will double as well
- [ ] if you double the voltage difference, the resistance will double as well
- [x] if you double the current, the voltage difference will double as well
- [ ] if you double the current, the resistance will double as well

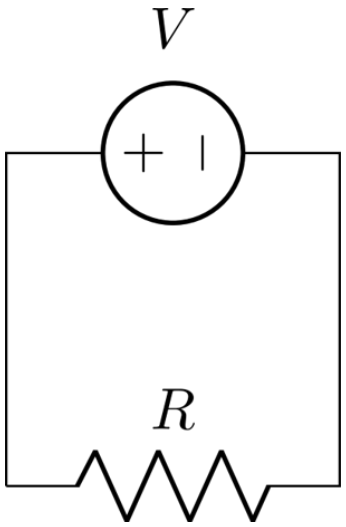
✔

Submit You have used 2 of 3 attempts

Numerical Input

5.0/5.0 points (graded)

In the following circuit, if the voltage source has a voltage difference of $V = 15.0\ \mathrm{V}$ and a resistance of $R = 10.5\ \mathrm{k\Omega}$.



How much current does the voltage source supply?

1.42857 mA ✔

1.42857

Submit You have used 2 of 4 attempts

Checkboxes

3.0/3.0 points (graded)

Which of the followings are true?

- [x] Positive charges tend to move from higher Voltage (V_{high}) to lower Voltage (V_{low}) location
- [x] Positive charges tend to move from higher Potential Energy (U_{high}) to lower Potential Energy (U_{low}) location
- [ ] Negative charges tend to move from higher Voltage (V_{high}) to lower Voltage (V_{low}) location

- [x] Negative charges tend to move from higher Potential Energy (U_{high}) to lower Potential Energy (U_{low}) location
- [x] Current tends to flow from higher Voltage (V_{high}) to lower Voltage (V_{low}) location
- [ ] Current tends to flow from lower Voltage (V_{low}) to higher Voltage (V_{high}) location

✔

Submit You have used 2 of 3 attempts

Numerical Input

4.0/4.0 points (graded)

On the left at point A, there's a voltage of $V_A = 13\ \mathrm{V}$. And on the right there's another point B. If a charge with $q = -4\ \mathrm{C}$ moves from point A to point B and while moving it does a work of $W = 2\ \mathrm{J}$, what's the voltage of point B?

13.5 ✔

13.5

Submit You have used 2 of 4 attempts

Numerical Input

3.0/3.0 points (graded)

$7.5\ \mathrm{A}$ of current is flowing through a conductor for $7\ \mathrm{sec}$. How many electrons were flowing through the conductor?

Electron's charge is $-1.6 \times 10^{-19}\ \mathrm{C}$. You can use "^" symbol for exponent. For example, type in "1.23 * 10^10" and it will be automatically converted into scientific format.

3.28125*10^20 ✔

$3.28125 \cdot 10^{20}$

Submit You have used 2 of 3 attempts

If you're done submitting answers to all the questions, please

1. Take a picture of your hand-written calculations

2. If you have multiple images, then convert it into a single pdf file.

3. Follow this link and submit your file there.
https://forms.gle/at8VmTk2Cehatg99A

4. To make sure whether you've successfully submitted the file, please go to this spreadsheet and search for your Student ID.
https://docs.google.com/spreadsheets/d/1AG6n9gMuImXKp27YhRshTjrpI-358_IY1r4PbozRsO0/edit?usp=sharing

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