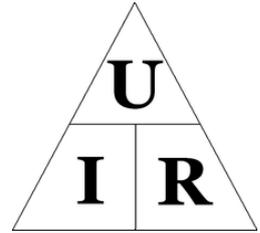


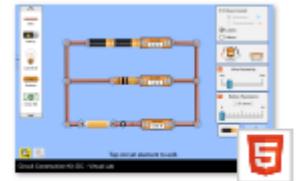
COUNT AND PROGRAM

1. The chain has a 12V source and a 6Ω resistance rheostat. How strong is the current in the chain? (2points)
 - a. How long did the current flow, if 10C charge has flown? (2 points)
 - b. What charge will flow in 30 seconds? (2points)



DRAW THE CHAIN

2. Join and draw the electric chain (*in your task sheets*) which consists of 1 resistor, 1 ammeter, 2 bulbs, 1 switch, 1 battery. Use :: <https://phet.colorado.edu/> (Starting the task, turn to your teacher for assistance) (4points)

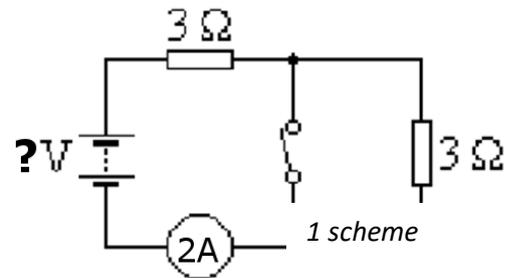


Circuit Construction Kit: DC - Virtual Lab

After joining the el.chain, take a photo of the screen and save it in your task folder together with your programming tasks.

ADDITIONAL TASK

3. Draw an electric chain according to scheme 1
 - a. Count the electric voltage in the chain when the current is switched on. (2points)
 - b. What voltage will there be with the switch turned on if the ammeter shows the same? (2points)
 - c. Join and check how this scheme works. Describe the result (with the switch on). (use <https://phet.colorado.edu/>) (3points)



DIRECTIONS FOR THE TASKS PHYSICS

1. Do the tasks in the task sheets.
2. It is obligatory to do BOTH TASK

DIRECTIONS FOR THE IT TASKS

1. Do your tasks in the COMPUTER (codeblocks program).
2. It is obligatory to do the FIRST TASK. **If you do the second task, you will be given additional points.**
3. Save the task in M disc, creating a new folder (**Integrated IT/PHYSICS, Name Surname**).
Create a new folder for each task. . E.g. task 1 ,task 2, task 3.
4. Stating the program in the comments, write down the tyle of the task. .

Use these variables: (they can be replaced by your own versions)

```
int I;  
int R;  
int U;  
int q  
int t
```

ASSESSMENT of PHYSICS

Task 1	Task 2	Task 3
6 points	4 points	7 points

ASSESSMENT of IT

Suitable for usage libraries: - **1 point**

Program variables are of suitable type - **1 point**

Program structure is properly written down - **1 point**

File prename is of cpp type -**1 point**

You have written down CORRECT formulae of arithmetics- **5 point**

-A deduced correct answer - **1 point**

