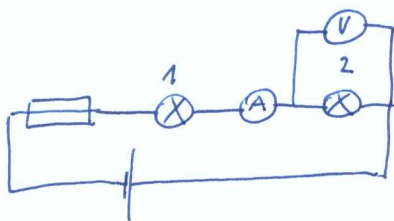


Preverjanje znanja FIZ 9

1.



2.

primer:
 $Q = 2700 \text{ mAh}$ $U = 14 \text{ V}$
 $t = 24 \text{ ur}$
 $I = ?$
 $R = ?$

$Q = I \cdot t$ $U = R \cdot I$

$I = \frac{Q}{t} = \frac{2700 \cdot \frac{1}{1000} \text{ Ah}}{24 \text{ h}} = 0,1125 \text{ A}$
 $R = \frac{U}{I} = \frac{14 \text{ V}}{0,1125 \text{ A}} = 124,4 \Omega$

3. a) $I_a = 1,2 \text{ A}$ b) $I_b = 12 \text{ A}$

4. elektronov, + k -, V-meter, vzporedno, A-meter, zaporedno, varovanje el. porabnikov pred prevelikim el. tokom, zaporedno

5. a) $U_a = 5,5 \text{ V}$ b) $U_b = 55 \text{ V}$

$Q_e = P_e \cdot t$

6. $P = 2,5 \text{ kW}$
 $t = 0,5 \text{ h}$
 $Q_e = ?$
 $1 \text{ kWh} = 0,08 \text{ €}$

$Q_e = P_e \cdot t$
 $Q_e = 2500 \text{ W} \cdot 0,5 \text{ h} = 1250 \text{ Wh} = 1,25 \text{ kWh}$
 $1 \text{ kWh} \dots 0,08 \text{ €}$
 $1,25 \text{ kWh} \dots x$ $\rightarrow x = \frac{1,25 \text{ kWh} \cdot 0,08 \text{ €}}{1 \text{ kWh}} = 0,10 \text{ €}$

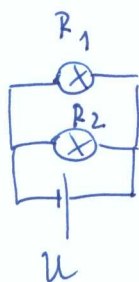
7. $U = 220 \text{ V}$
 $I = 11,2 \text{ A}$
 $P = ?$

$P = U \cdot I = 220 \text{ V} \cdot 11,2 \text{ A} = 2464 \text{ W}$
 $P = U \cdot I$
 $Q = P \cdot t$

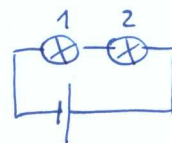
8. $P = 4 \text{ kW}$
 $U = 220 \text{ V}$
 $I = ?$
 $t = 0,5 \text{ h}$
 $Q = ?$

$I = \frac{P}{U} = \frac{4000 \text{ W}}{220 \text{ V}} = 18,18 \text{ A}$
 $Q = \frac{P}{I} \cdot t = 4000 \text{ W} \cdot 0,5 \text{ h} = 2000 \text{ Wh} = 2 \text{ kWh}$

9. $R_1 = 80 \Omega$
 $R_2 = 100 \Omega$
 $U = 10 \text{ V}$



$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$
 $\frac{1}{R} = \frac{1}{80} + \frac{1}{100}$
 $\frac{1}{R} = \frac{5}{400} + \frac{4}{400}$
 $\frac{1}{R} = \frac{9}{400}$
 $R = \frac{400}{9} = 44,4 \Omega$



$R = R_1 + R_2$
 $R = 80 \Omega + 100 \Omega$
 $R = 180 \Omega$

$I = \frac{U}{R} = \frac{10 \text{ V}}{180 \Omega} = 0,056 \text{ A}$
 $I = I_1 = I_2 = 0,056 \text{ A}$

$U = U_1 = U_2 = 10 \text{ V}$
 $I = \frac{U}{R} = \frac{10 \text{ V}}{44,4 \Omega} = 0,225 \text{ A}$
 $I_1 = \frac{U_1}{R_1} = \frac{10 \text{ V}}{80 \Omega} = 0,125 \text{ A}$
 $I_2 = \frac{U_2}{R_2} = \frac{10 \text{ V}}{100 \Omega} = 0,1 \text{ A}$

$U_1 = R_1 \cdot I_1 = 80 \Omega \cdot 0,056 \text{ A} = 4,48 \text{ V}$
 $U_2 = R_2 \cdot I_2 = 100 \Omega \cdot 0,056 \text{ A} = 5,6 \text{ V}$

* (ker je tok zaokrožen na tri decimalke, vrsta $U_1 + U_2 > 10 \text{ V}$)