

Module name: **Electrical Circuits 1**
 Module ID: **IS-FEE-10070W**
 Module type: **Class**
 Semester: **winter 2024/2025**
 Instructor: **Jarosław Forenc, j.forenc@pb.edu.pl**

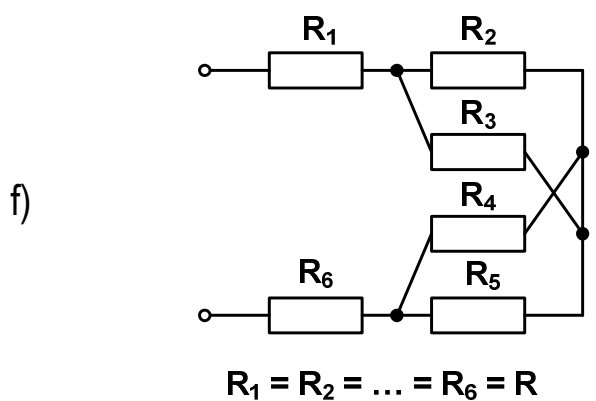
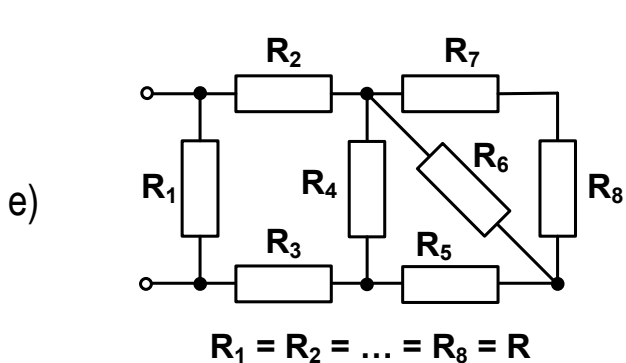
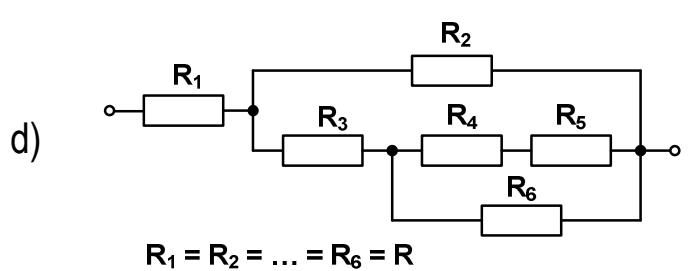
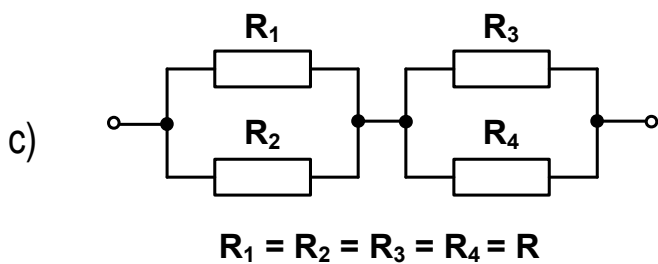
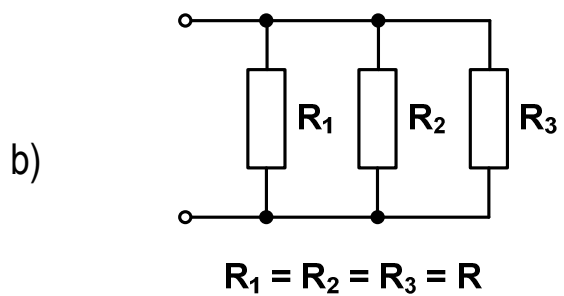
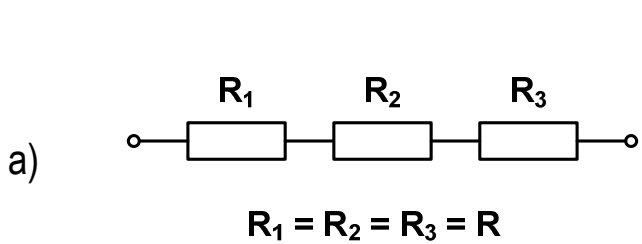
Class 01 (07.10.2024)

1. Calculate the length of the copper wire with cross-sectional area:

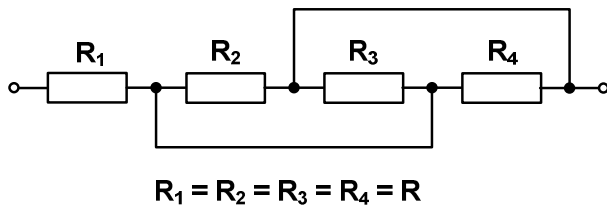
- a) 1.5 mm^2
- b) 2.5 mm^2

when its resistance is 1Ω .

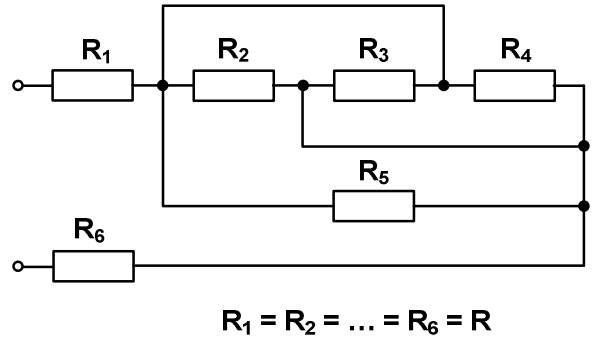
2. Calculate the equivalent resistance of circuits shown below.



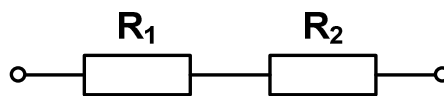
g)



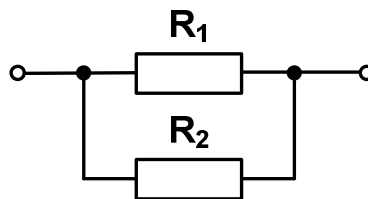
h)



3. Connect two resistors of equal / different resistance in series. Measure and calculate the equivalent resistance. Compare the obtained results.



4. Connect two resistors of equal / different resistance in parallel. Try to predict what the resistance will be for a parallel connection (less / greater than one resistor). Measure and calculate the equivalent resistance. Compare the obtained results.



5. Connect several resistors in series-parallel. Measure and calculate the equivalent resistance. Compare the obtained results.

6. Connect a thermistor to the ohmmeter. Touch the thermistor with your hand. Check how the resistance changes (increases / decreases).

7. Connect a photoresistor to the ohmmeter. Cover the photoresistor with your hand. Check how the resistance changes (increases / decreases).

8. Check between which terminals of the potentiometer the resistance changes. Set the specified resistance value.