

### Task 1: Identifying the components

- 1. Identify the components of the circuit.
- 2. Label the components in the circuit diagram.
- 3. Explain the function of each component.
- 4. Describe the flow of current in the circuit.



### Task 2: Analyzing the circuit

- 1. Calculate the total resistance of the circuit.
- 2. Determine the current flowing through each component.
- 3. Calculate the power dissipated by each component.
- 4. Explain the relationship between voltage, current, and resistance.



### Task 3: Designing a circuit

- 1. Design a circuit that meets the specified requirements.
- 2. Calculate the component values needed for the circuit.
- 3. Explain the design choices made.
- 4. Describe the expected performance of the circuit.

