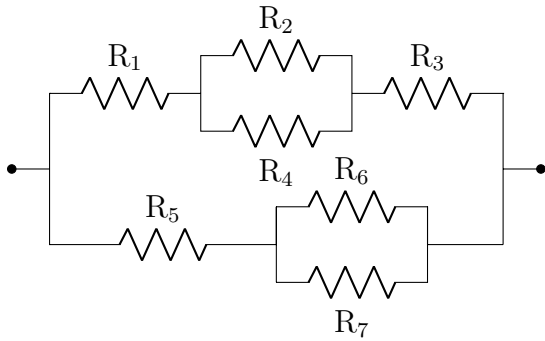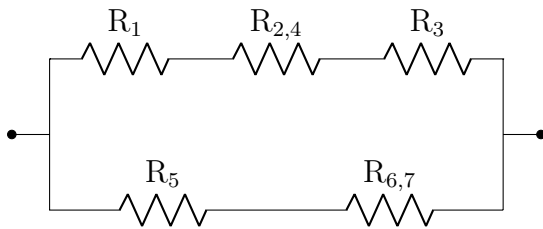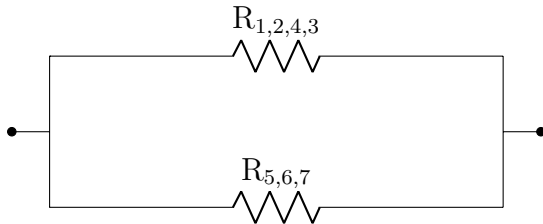Steps for reducing resistances:
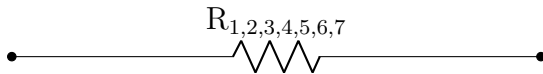

1. Find smallest groups. In this case, R_2 with R_4 and R_6 with R_7 are parallel groups so must be reduced first.

2. In the next step R_1, $R_{2,4}$ and R_3 are in series, as are R_5 and $R_{6,7}$.

3. In the next step $R_{1,2,4,3}$ and $R_{5,6,7}$ are parallel, so reduce those.

4. The final reduced resistance is represented by a single resistance.