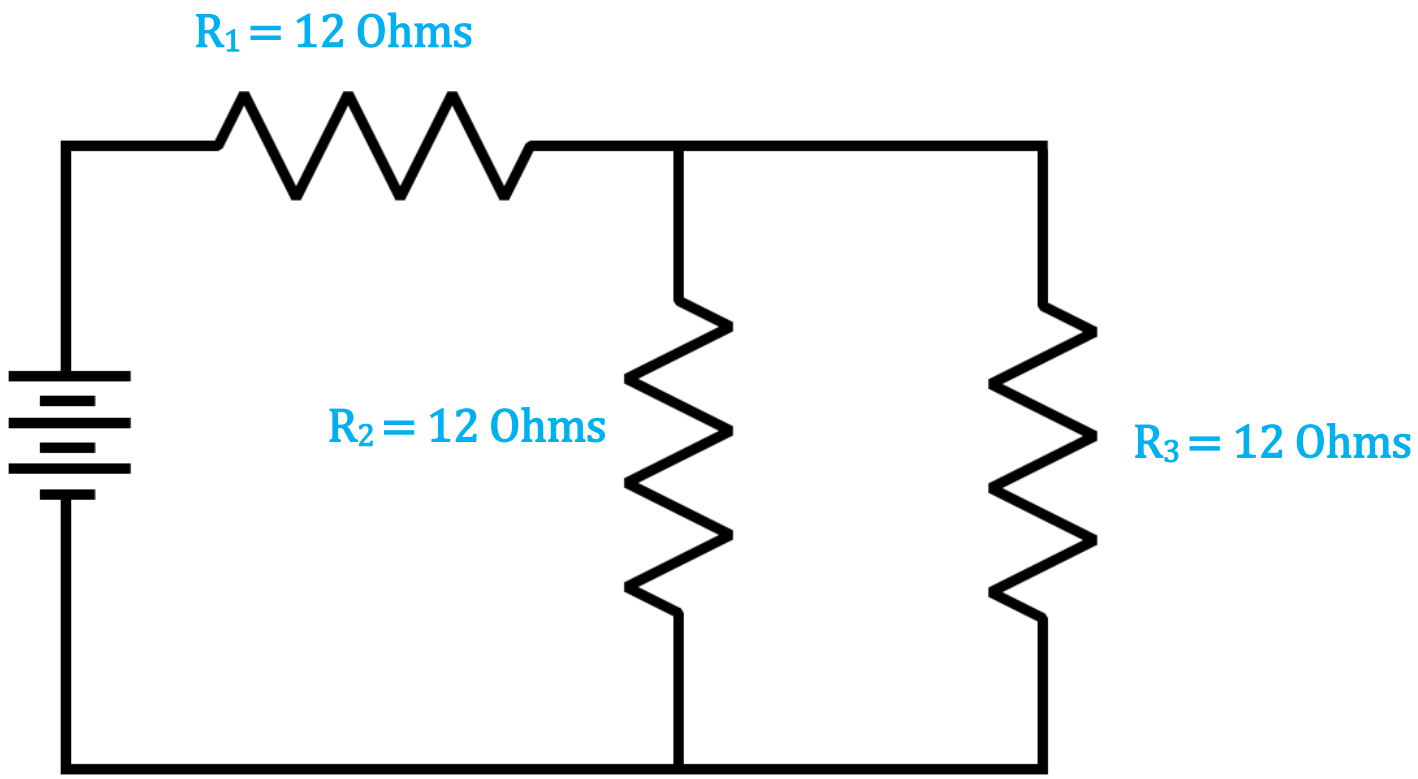
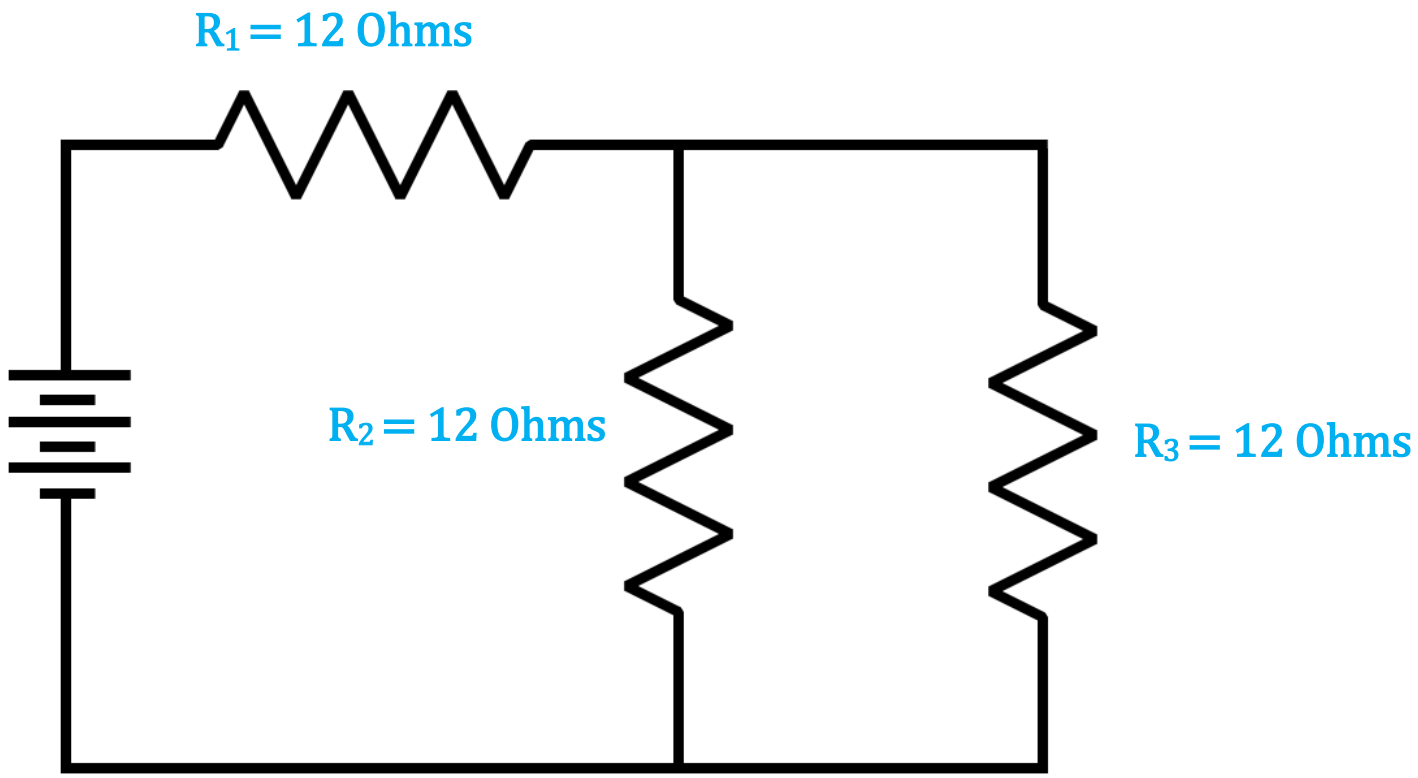
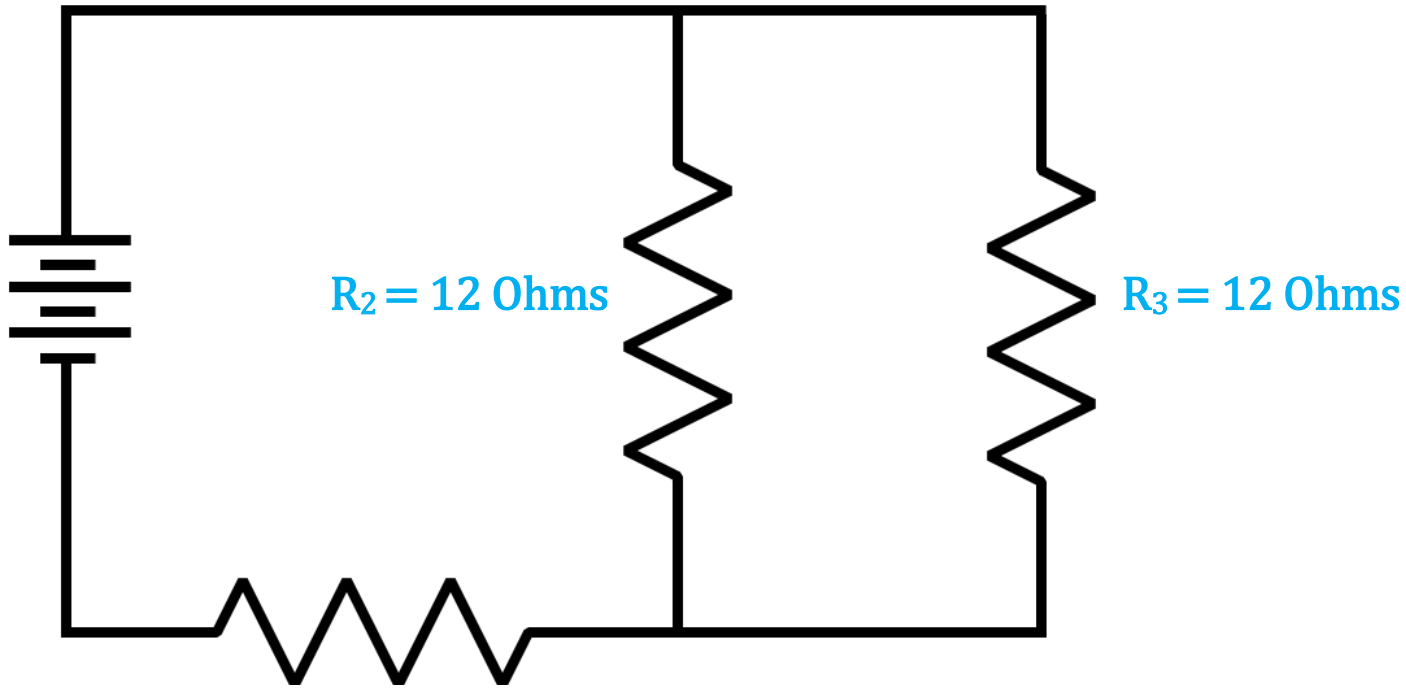
Resistance Calculation 1


$R_1 = 12$ Ohms
$R_2 = 12$ Ohms
$R_3 = 12$ Ohms



$$R_{2,3} = \frac{R_2 \times R_3}{R_2 + R_3} \qquad R_{2,3} = \frac{12 \times 12}{12+12} \qquad R_{2,3} = \frac{144}{24} \qquad R_{2,3} = 6 \text{ Ohms}$$

$$R_T = R_1 + R_{2,3} = 12 + 6 = 18 \text{ Ohms}$$



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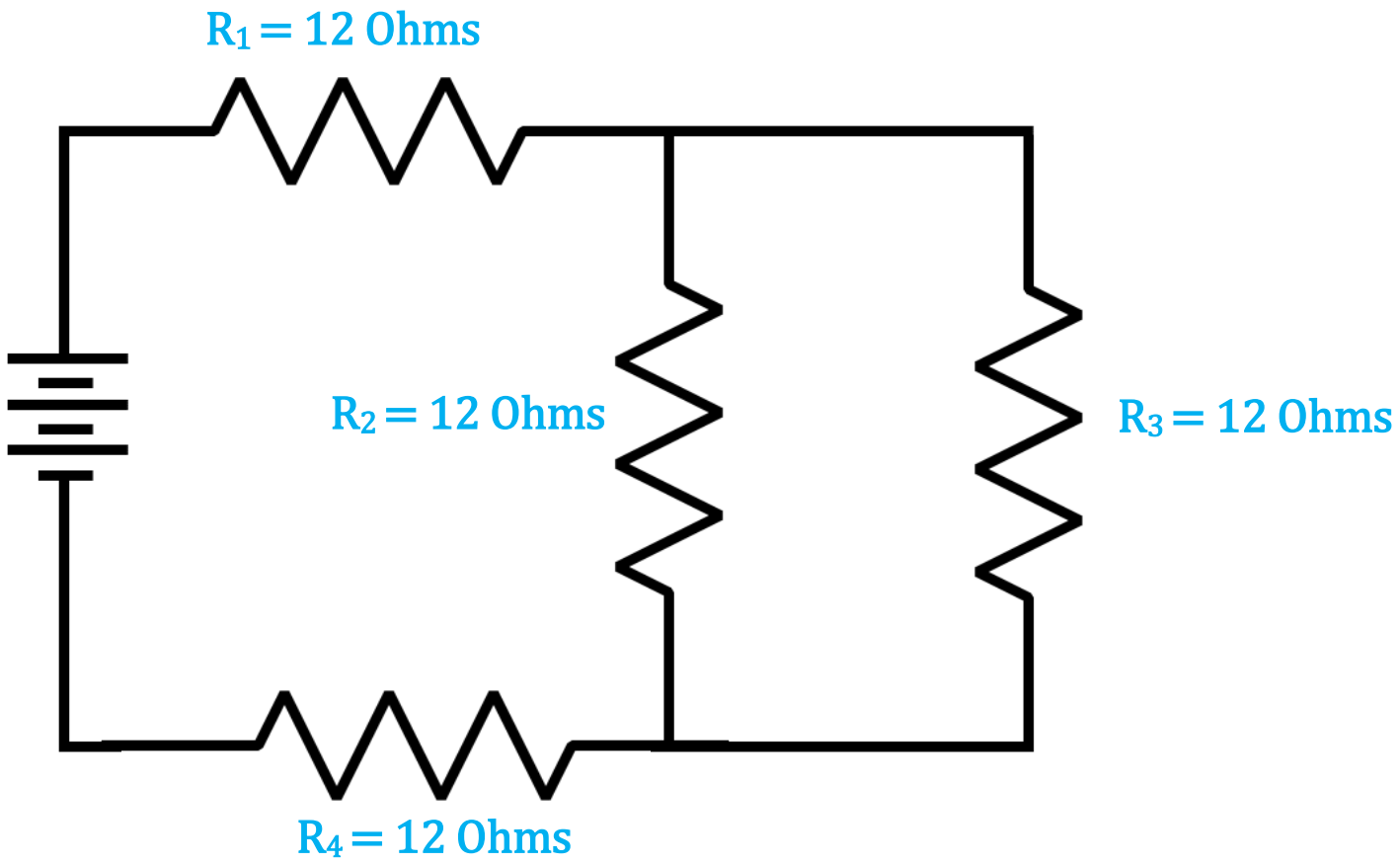

$$R_{2,3} = \frac{R_2 \times R_3}{R_2 + R_3} \qquad R_{2,3} = \frac{12 \times 12}{12+12} \qquad R_{2,3} = \frac{144}{24} \qquad R_{2,3} = 6 \text{ Ohms}$$

$$R_T = R_1 + R_{2,3} + R_4 = 12 + 6 + 12 = 30 \text{ Ohms}$$