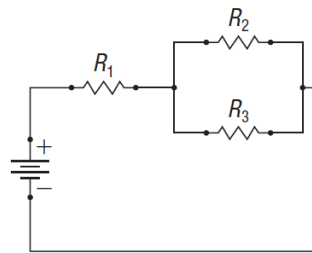


- Calculate the time required for 5 C of charge to pass through a resistor if the current is 950 mA. (2 marks)
- Calculate the amount of power required to charge a battery if 1500 J of energy is transferred in 5 min. (2 marks)
- Calculate the electric potential difference between the negative and positive terminals of a battery if 1200 J of electric potential energy is transformed to move 100 C of charge between the terminals. (2 marks)
- Calculate the total resistance in the following circuit if the resistor values are as follows:  $R_1 = 8 \Omega$ ,  $R_2 = 15 \Omega$ , and  $R_3 = 30 \Omega$ . (3 marks)



- In the following circuit, the potential difference across the battery is 18 V.  $V_1$  is 8.0 V and  $R_2 = 32.0 \Omega$ . Calculate the values of  $R_1$ ,  $V_2$ , and the current through the circuit. (3 marks)
- For the following circuit,  $R_1 = 5.0 \Omega$  and  $R_2 = 50.0 \Omega$ . The potential difference across the battery is 20 V, and  $V_1$  is 12 V. Calculate  $I_1$ ,  $I_2$ ,  $I_3$ , and  $R_3$ . (4 marks)

