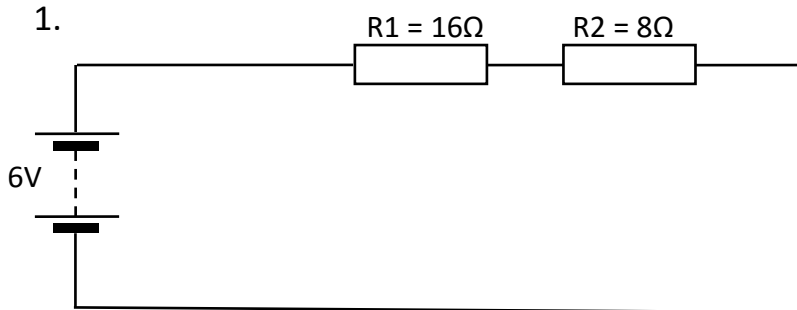


S3 Engineering Science Homework

Series Circuits

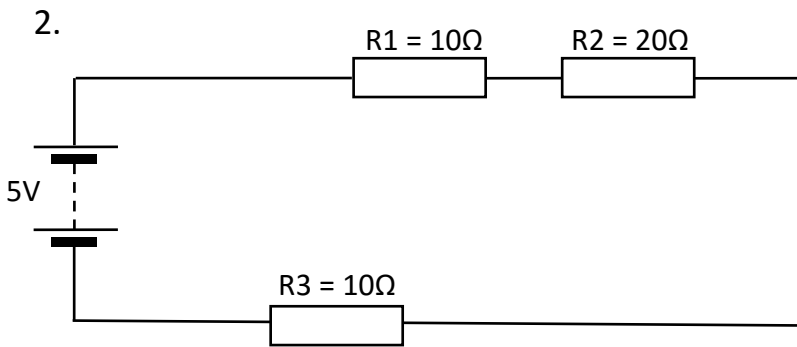
Calculate the total resistance (R_t) and current (I) flowing in the following series circuits:



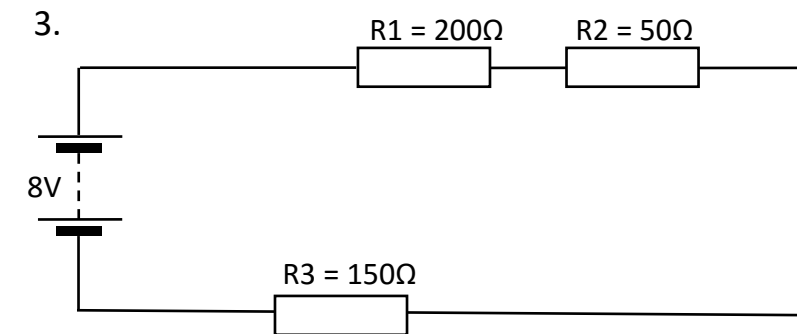
$$R_t = R_1 + R_2 \quad I = V \div R_t$$

$$R_t = \quad I =$$

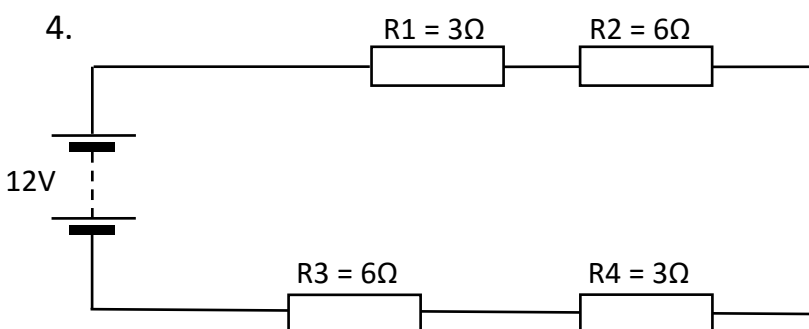
$$R_t = \quad I =$$



$$R_t = R_1 + R_2 + R_3 \quad I = V \div R_t$$



$$R_t = R_1 + R_2 + R_3 \quad I = V \div R_t$$

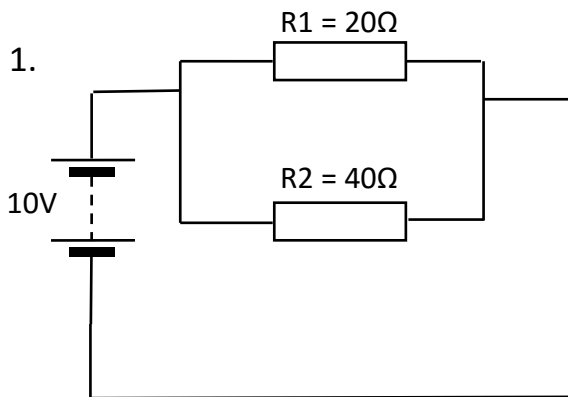


$$R_t = \quad I =$$

S3 Engineering Science Homework

Parallel Circuits

Calculate the total resistance (R_t), the total current (I_c) and the current flowing in each branch of the following parallel circuits:



$$R_t = \frac{R_1 \times R_2}{R_1 + R_2}$$

$$I_c = \frac{V}{R_t}$$

$$R_t =$$

$$I_c =$$

$$R_t =$$

$$I_c =$$

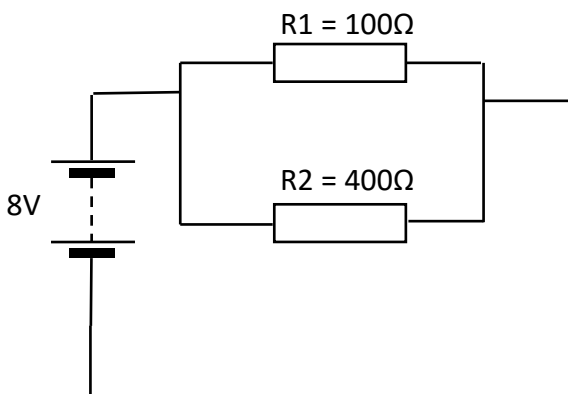
$$R_t =$$

$$I_1 = \frac{V}{R_1} \quad I_2 = \frac{V}{R_2}$$

$$I_1 = \quad I_2 =$$

$$I_1 = \quad I_2 =$$

2.



$$R_t = \frac{R_1 \times R_2}{R_1 + R_2}$$

$$I_c = \frac{V}{R_t}$$

$$R_t =$$

$$I_c =$$

$$R_t =$$

$$I_c =$$

$$R_t =$$

$$I_1 = \frac{V}{R_1} \quad I_2 = \frac{V}{R_2}$$

$$I_1 = \quad I_2 =$$

$$I_1 = \quad I_2 =$$