RESISTORS / OHMS LAW

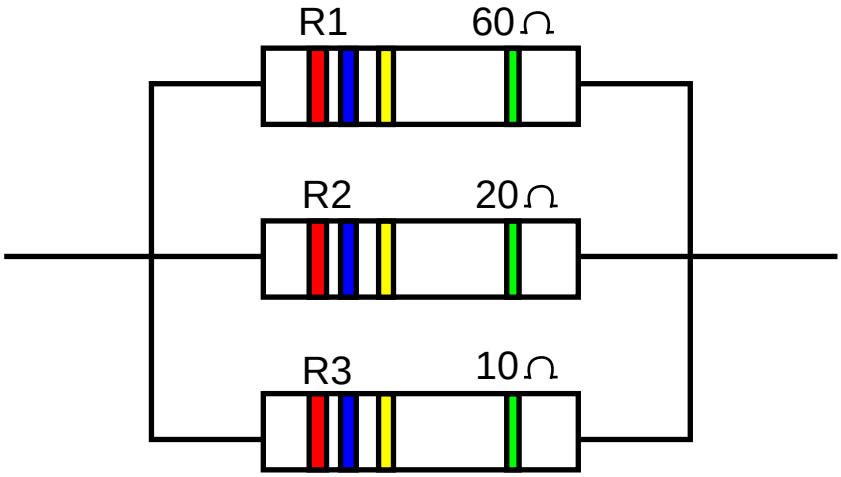
On behalf of The World Association of Technology Teachers

W.A.T.T.

World Association of Technology Teachers

This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

RESISTORS IN PARALLEL - QUESTION 4



1. Calculate the total resistance for the three resistors in parallel

The usual formula is seen opposite although it is easier to break down the calculation into two separate ones. These are similar to calculations you have attempted earlier.

$$\frac{1}{R_{(total)}} = \frac{1}{R1} + \frac{1}{R2} + \frac{1}{R3}$$

To make the calculation easier calculate the total of the first two resistors.

First calculate the total resistance of the first two resistors.

$$\frac{1}{R_{(total)}} = \frac{1}{R1} + \frac{1}{R2}$$

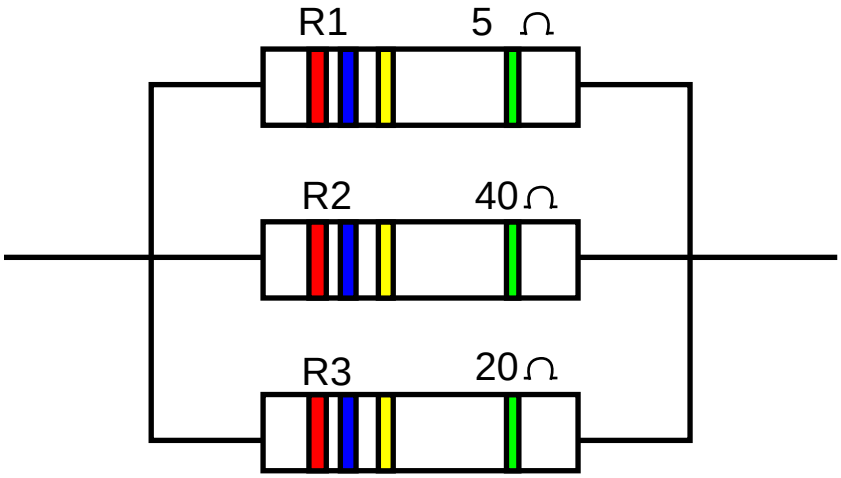
$$\Rightarrow \frac{R1 \times R2}{R1 + R2} = \_\_\_\_\_ = \_\_\_\_\_$$

$$\Rightarrow \quad \Omega \; R_{(total)}$$

Then, take the total of the first two resistors and perform the same calculation with the third resistor.

$$\frac{R_{(total)} \times R3}{R_{(total)} \times R3} = \_\_\_\_\_ = \_\_\_\_\_ = \quad \Omega$$

RESISTORS IN PARALLEL - QUESTION 5



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