

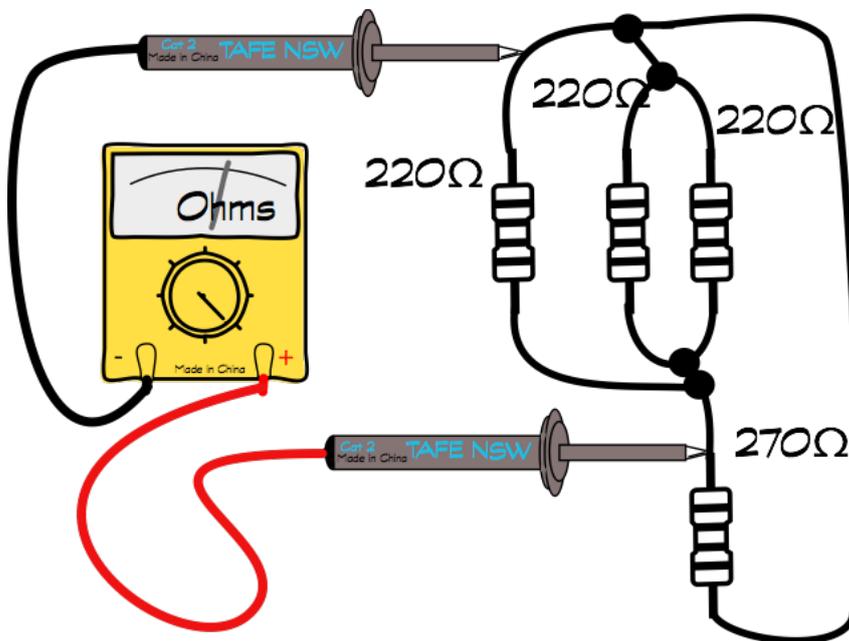
This homework covers the work mostly covered in week 4 but can cover all the work from inception. Assessable under the 10% formative component of the assessment guidelines.



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Show all working.

Q1 Determine the resistance of the following circuit.



Q2 If one 220Ω resistor becomes open circuit, what is the new total resistance?

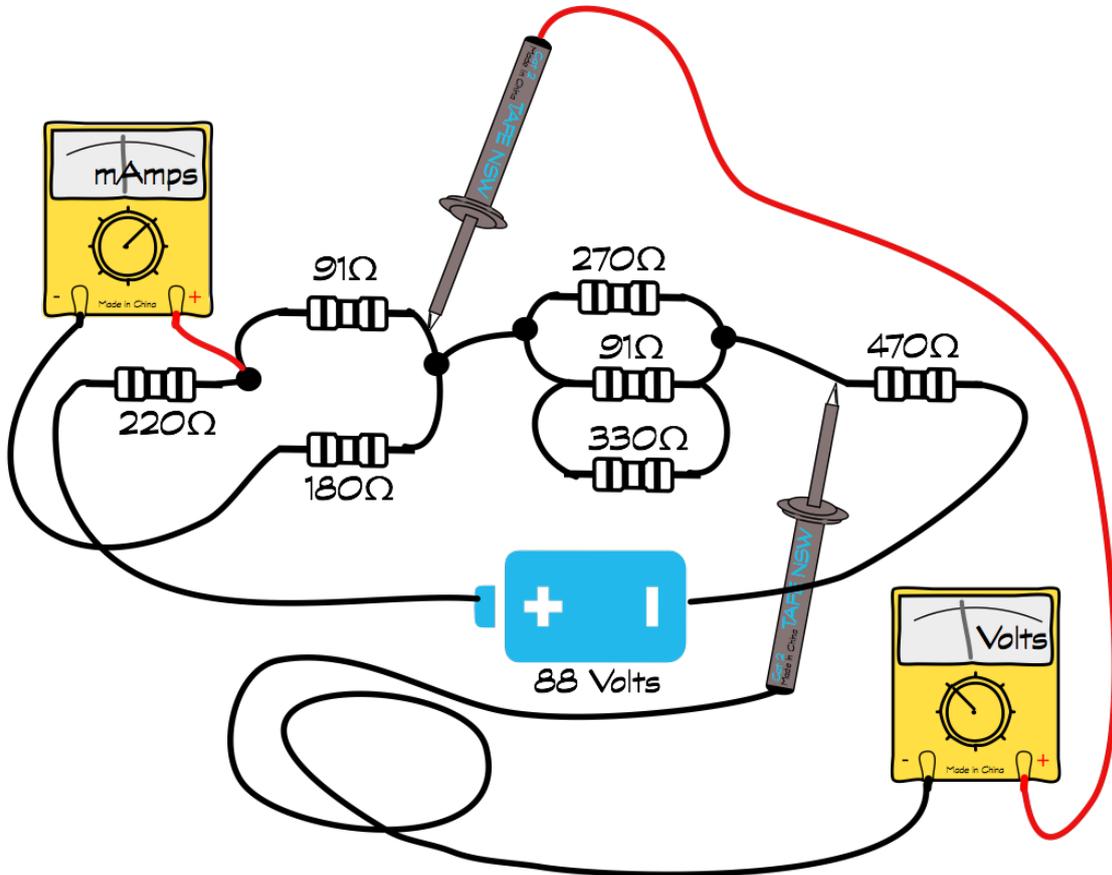
Q3 If one 220Ω resistor becomes short circuit, what is the new total resistance?

Q4 What is the colour code for the 270Ω resistor?

Q5 What is the difference between a category 2 multimeter probe and a category 1 probe?

The next few questions difficulty level have taken a jump to more difficult. On separate lined paper, redraw, or cut and paste this circuit and **show all the steps and working in your solution.**

Q6 Determine the resistor current on the current meter.



Q7 Determine the voltage shown on the voltmeter.

Q8 Find the total circuit current and the total circuit power dissipation.

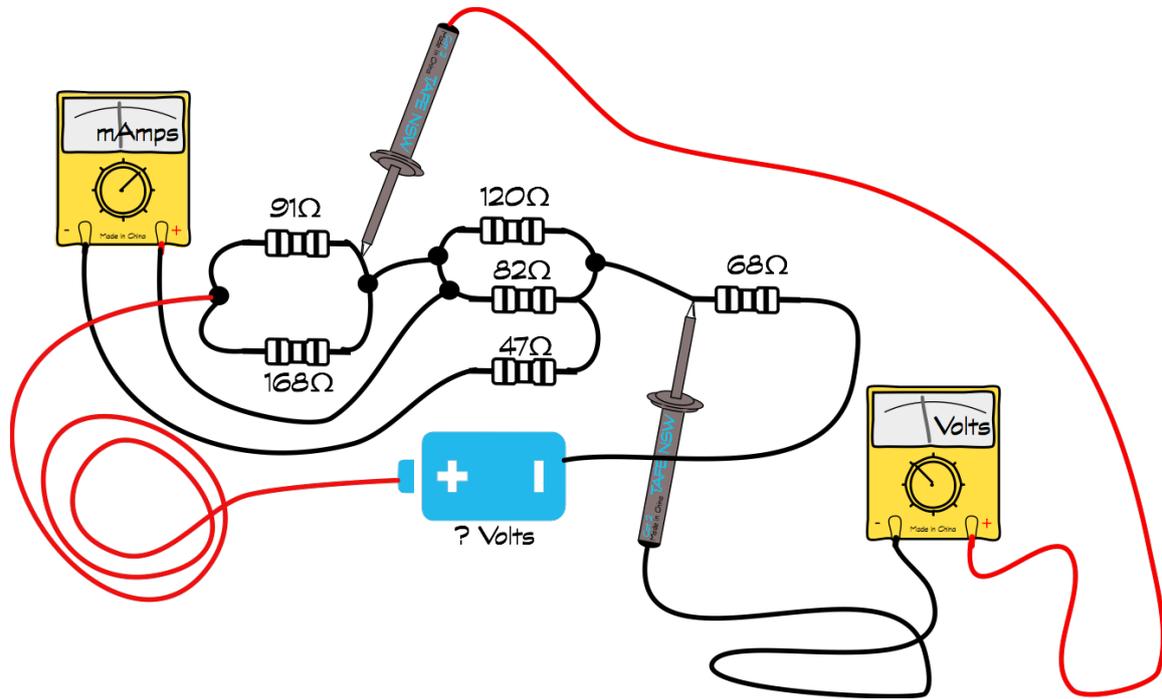
Q9 Find the power dissipated in the 330Ω resistor.

Q10 If the 330Ω resistor becomes open circuit find the new voltmeter reading.

Q11 If the 330Ω resistor becomes open circuit find the new current meter reading.

Q12 The 180Ω resistor suddenly became short circuit. The new current meter reading and the new voltmeter readings are \_\_\_\_\_ & \_\_\_\_\_

Q13 The current meter in the circuit shown below is reading 110mA. Find the reading on the voltmeter.



Q14 The same 110mA is showing on the current meter, now find the battery voltage.

Q15 Using the **same battery voltage you found in Q14**, the 120Ω resistor suddenly goes open circuit. Find the new current meter value.

Homework ends