

Week 1 Prelab

Briefly answer the following questions.

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1. Identify the resistors:



Yellow-Violet-Orange-Gold

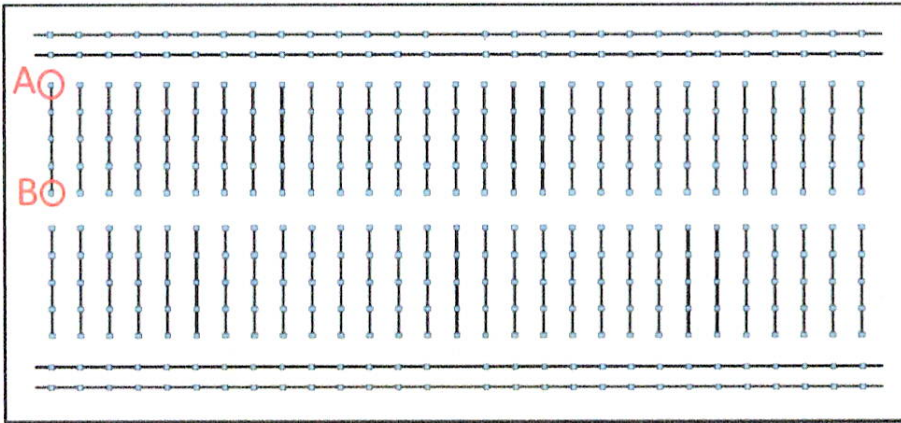
$470 \cdot 10^3 \Omega$ with a tolerance of $\pm 5\%$.



Brown-Black-Yellow-Silver

$10 \cdot 10^4 \Omega$ with a tolerance of $\pm 10\%$.

2.



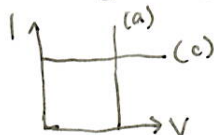
If a resistor is inserted into the breadboard with one leg at point A and one leg at point B, what resistance will an ohmmeter measure for that resistor? Why? What should you do instead to measure the proper resistance?

0. the resistor should be connected across the columns.



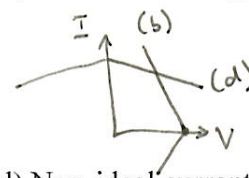
3. Draw the I-V curves for the following diagrams

(a) Ideal voltage source



(c) Ideal current source

(b) Non-ideal voltage source



(d) Non-ideal current source

4. Prove the voltage and current divider equations: They are basic and very commonly used equations that you should memorize for use in all your future electronics courses.