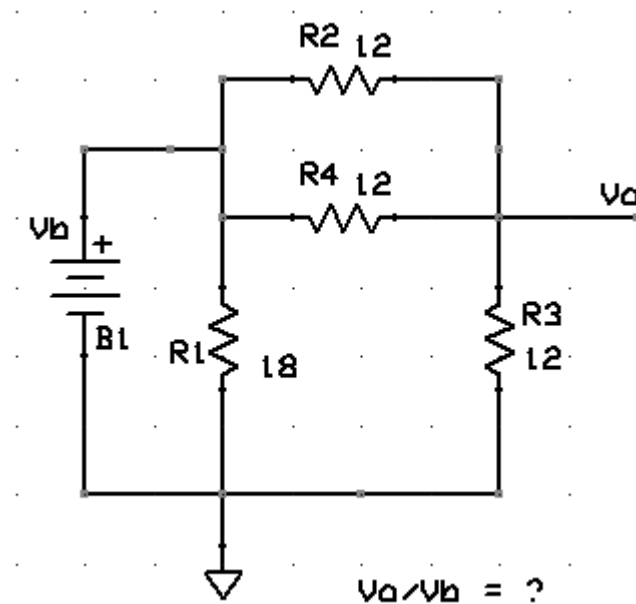


## Quiz 9

1. Given the schematic below, what is  $V_o/V_b$ ? Show your calculations - 2 points



2. Resistivity of a wire depends on (justify):

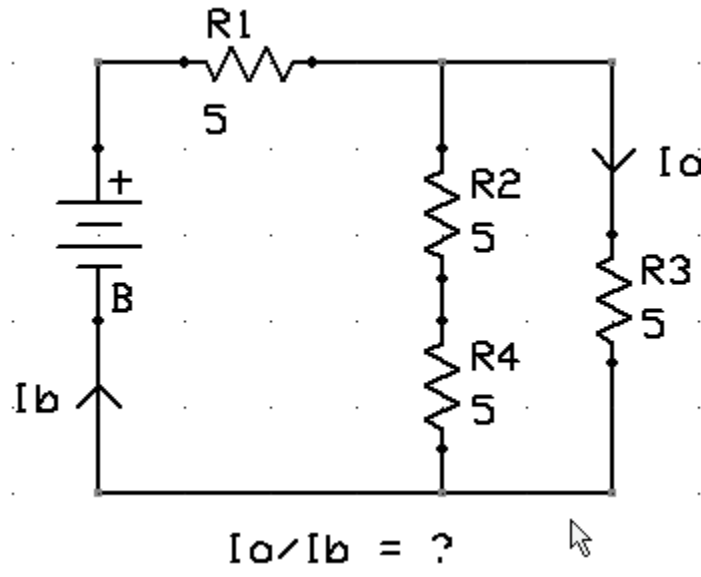
- (A) length
- (B) material
- (C) cross section area
- (D) none of the above.

3. What fields and why should the Title Block of the schematic page have?

4. When  $N$  resistances each of value  $R$  are connected in parallel, then resultant resistance is  $X$ . When these  $N$  resistances are connected in series, total resistance is ? Show your calculations.

- (A)  $NX$
- (B)  $RNX$
- (C)  $X/N$
- (D)  $N^2X$ .

5. Given the schematic below, what is  $I_o/I_b$ ? Show your calculations - 2 points



6. Resistance of a wire is  $R$  Ohms. The wire is stretched to double its length, then its resistance in ohms is ? Show your calculations

- (A)  $R/2$
- (B)  $4R$
- (C)  $2R$
- (D)  $R/4$ .

7. ADC has 12-bit resolution measuring 4.096V signal. What is the effective bit number when it measures 0.5V? Justify

8. Two bulbs marked 200 watt-250 volts and 100 watt-250 volts are joined in series to 250 volts supply. Power consumed in circuit is: Show your calculations

- (A) 33 watt
- (B) 67 watt
- (C) 100 watt
- (D) 300 watt.