Assignment 8

The objective of the assignment is to analyze the circuit shown below and determine the output voltage $V_{out}$.

1. Calculate the total resistance of the amplifier.
2. Calculate the purpose of the amplifier.
3. Calculate the total resistance of the voltage divider in the amplifier.
4. Calculate the total resistance of the voltage divider in the amplifier.
5. Calculate the total resistance of the voltage divider in the amplifier.
6. Calculate the total resistance of the voltage divider in the amplifier.
7. Calculate the total resistance of the voltage divider in the amplifier.
8. Calculate the total resistance of the voltage divider in the amplifier.
9. Calculate the total resistance of the voltage divider in the amplifier.
10. Calculate the total resistance of the voltage divider in the amplifier.

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**Diagram 1:**

- $V_b$ connected to $M_1$.
- $M_1$ connected to $M_2$.
- $M_2$ connected to $V_{out}$.

**Diagram 2:**

- $V_b$ connected to $M_1$.
- $M_1$ connected to $M_2$.
- $M_2$ connected to $V_{out}$.

**Diagram 3:**

- $V_b$ connected to $M_1$.
- $M_1$ connected to $M_2$.
- $M_2$ connected to $V_{out}$.