Problem 1

You just bought a shiny new voltmeter from Acme Electronics, Inc. It cost you $4.95, shipping included. You take it to lab and use it to measure the voltages in the divider circuit shown.

What values for $v_{R1}$ and $v_{R2}$ will you measure if the meter is ideal?

$v_{R1} =$ _____________________________  $v_{R2} =$ ___________________________

However, when you perform the two measurements, the meter gives the following readings: $v_{R1} = 7.875$ V and $v_{R2} = 10.5$ V. Presumably, the differences must be due to the internal resistance of the voltmeter being less than infinity. Calculate the apparent resistance of the meter.

$R_{VM} =$ ___________________________
Put your final answers on this sheet and attach any additional sheets behind. You must include your work to get full credit.

**Problem 2**

Find the current through resistor $R_4$ in the circuit shown.

\[ i_{R4} = \text{______________} \]
Problem 3

In the circuit shown, find the voltage across resistor $R_4$.

$V_{R4} =$ __________________________
Problem 4

In the circuit shown, find \( i_{R3} \).

\[ i_{R3} = \]