

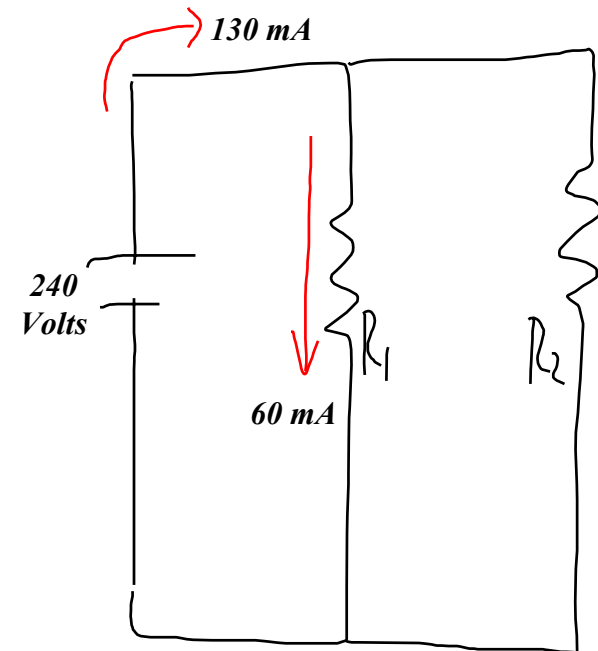
**UNO #7 – (4/11/07) Section A** Show all work inclusive but not limited to a sketch, pertinent relationships, FLM, units, isolation of appropriate variables, et. al. , as applicable.

Name \_\_\_\_\_

***Derive an algebraic expression for the total resistance ( $R_T$ ) of two parallel resistors ( $R_1$  &  $R_2$ ) where  $R_T$  is isolated and in a non-reciprocal expression.***

**UNO #7 – (4/11/07) Section B** Show all work inclusive but not limited to a sketch, pertinent relationships, FLM, units, isolation of appropriate variables, et. al. , as applicable.

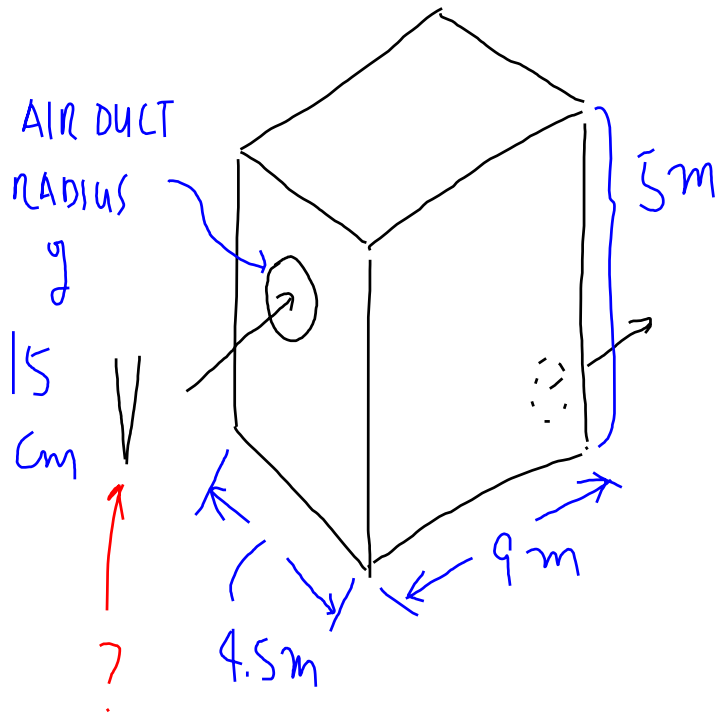
Name \_\_\_\_\_



For the circuit to the left, calculate the current through and voltage drop across resistor  $R_2$ .

**UNO #7 – (4/11/07) Section D** Show all work inclusive but not limited to a sketch, pertinent relationships, FLM, units, isolation of appropriate variables, et. al. , as applicable.

Name \_\_\_\_\_



For the room volume to the left, and given one air exchange every ten minutes, calculate the velocity through the inlet air duct on the left side.

**UNO #7 – (4/11/07) Section E** Show all work inclusive but not limited to a sketch, pertinent relationships, FLM, units, isolation of appropriate variables, et. al. , as applicable.

**Name** \_\_\_\_\_

***Derive an algebraic expression for the total resistance ( $R_T$ ) of three parallel resistors ( $R_1$ ,  $R_2$  &  $R_3$ ) where  $R_T$  is isolated and in a non-reciprocal expression.***