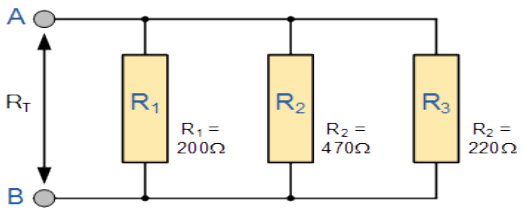
Word Problem Analysis

Word problems can be confusing! What does the instructor want? You need to analyze them to ensure that you are answering the question that is being asked.
The following steps can be used to analyze any word problems. Start by reading the whole question twice to ensure you don't miss any of the parts.

1. Look for **keywords** which explain to you the main ideas behind the question and underline.
2. Look for any words that may **restrict** the question – words or phrases that make it more specific. This is the part of the broad question that the instructor wants you to answer. You will only be given marks on the specific question that is asked.
3. The **problem type** will tell you what formula(s) to use so you are able to choose the appropriate formula(s) to fit the question.
4. Look for **operation** words which will tell you exactly what you need to do. If the instructor wants you to *calculate*, your answer will not be the same as if you are asked to *define*. Two or more operation words in a question means that you will have to break the question into parts and then answer each part to arrive at the final answer.
5. **Reword** or rephrase the question in your own words to make sure that you have understood the question, BUT you must stay close to the original question and contain the key, restricting, and operation words to match the original.
6. **Complete** the question following the operations that you have identified.

Example:

What is the total resistance of a circuit that contains three resistors in parallel, if R1 = 200 ohms, R2 = 470 ohms, and R3 = 220 ohms?

Key Words	Circuit, resistors, parallel, ohms
Restrictions	Parallel, total resistance, individual resistance (Not voltage or amperage or series)
Problem Type	Total Resistance (check against Formula chosen)
Operations required	1. Rt Formula – 1/Rt = 1/R1 + 1/R2 + 1/R3 2. Calculate resistance of each branch and add 3. Divide this sum into 1 to calculate total resistance in ohms
Reword	In a circuit with three resistors (200 ohms, 470 ohms, 220 ohms) connected in parallel, calculate the total resistance. 
Calculate	1/200 + 1/470 + 1/220 = .005 + .002 + .0.0045 = .0117 1/Rt = 1/.0117 = **85.67 ohms**

Word Problem Analysis

Practise Question:

Four resistors of equal value are series connected to a 120V DC source. If the total current flowing in the series circuit is 2 amps, then the value of each resistor is: ____

Key Words	
Restrictions	
Problem Type	
Operations required	1. 2. 3.
Reword	
Calculate	

Now choose from your list of questions that you would like to do better on. Do this until you can analyze any question quickly and effectively so you will achieve your best marks.