

## How to Solve It!

### Solving Problems: A Structured Method

1. State the unknown value. (What are you asked to find?)
2. List the information given in the problem (all the known values)
  - Use a diagram to help you organize if needed.
  - Convert units to base units if required. (ex: g to kg, or MJ to J)
3. Break a large problem into smaller problems.
4. Identify an equation(s) that may help you solve it.
5. Manipulate the equation so that the unknown is on the left side.
6. Substitute the known values.
7. Calculate the answer. (Yes, now you may pick up your calculator)
8. State your answer with the correct units and significant digits\*.

\*Significant Digits are not studied until grade 11, so ask your teacher about rounding off.

Until these steps become automatic, read them regularly while you are problem solving. Follow all the steps, all the time and do so neatly. It will seem uncomfortable at first, but stick with it and it will become second nature. This organized, logical, step-by-step method will help you succeed in solving problems.