Understanding a Relation

(I) Quantities in the Relation

(1) Properties
   (a) What kind of quantity is this (scalar or vector)?
   (b) If it’s a number, what are its possible signs (+, -, 0)? If it’s a vector, what are its possible directions?
   (c) What dimensions does this quantity have?
   (d) What magnitude, or range of magnitudes, does this quantity have in typical situations (note that you need to specify the units you use to answer this)?

   (2) Meaning
   In words, what is the meaning of this quantity? Try to describe the meaning so it is clear how to find (or measure) this quantity. If the quantity is a constant, what determines it value?

   (3) Comparing quantities
   Is there another quantity with which this quantity might easily be confused? If so, describe their similarities and differences.

(II) The Relation Itself

(1) Applicability
   In what physical situations can this relation be applied? Try to describe these situations so that you can decide whether the relation applies to any given situation.

   (2) Comparing relations
   Are there other relations with which this one might easily be confused? If so, describe their similarities and differences.