Math Diversion Problem 919

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An ounce of prevention is worth
a pound of cure.
— Popularized by
Benjamin Franklin

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Source: Chemical Principles: Quest for Insight, 3rd Ed
Title: Problem 1. p. F43 E.4
  Presenter: Atkins and Jones
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1 Problem

Given a quantity of $CuSO_4 \cdot 5\,H_2O$ in grams, determine how many grams of Cu are in this compound.

This is one of those problems that one has to go from grams to moles and back to grams. I won't actually solve this problem, but I do solve others like it later on. All I want to demonstrate here is a graphical representation of the solution steps so that the student gets a mental image of the logic involved.

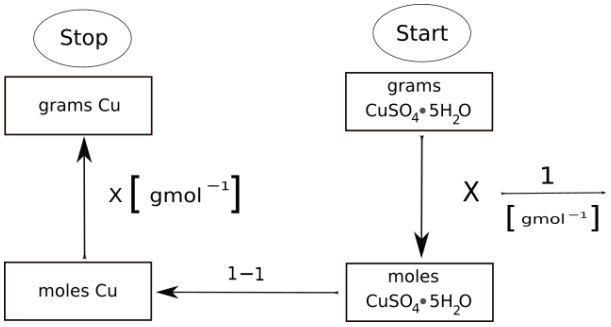

Figure 1. To solve this problem, we start off in gram-space and then convert to mole-space, do our calculation there, and then convert back to gram-space to get the final answer. Clearly, the conversion factors we need to employ have only been represented by the appropriate units.