

1116-97-2323 **Kristin L. Umland*** (umland@math.unm.edu), Department of Mathematics and Statistics,
MSC01 1115, 1 University of New Mexico, Albuquerque, NM 87131. *What Do We Mean by
Proportionality?* Preliminary report.

Ratios, rates, proportions, proportional relationships - what do we mean by these terms? There is a surprising amount of disagreement about their meaning and relative importance, and the result is a largely incoherent treatment of proportionality in many school textbooks. In this talk, I will discuss a modern treatment of these ideas by highlighting a key shift in recent approaches to this subject area from studying ratios and proportions to proportional relationships and explaining how this is an important pivot point between elementary school arithmetic and the high school study of functions. I will also discuss the role and nature of definitions in school mathematics (Received September 22, 2015)