Table 3.3:
Analysis Tool for Grade 7—Ratios and Proportional Relationships (7.RP) Domain

Content Standard Clusters	Which Standards in the Cluster Are Familiar?	What's New or Challenging in These Standards?	Which Standards in the Cluster Need Unpacking or Emphasizing?	How Is This Cluster Connected to the Other 6–8 Domains and Mathematical Practices?
Critical area: Developing understanding of and applying proportional relationships				
Analyze proportional relationships and use them to solve real-world and mathematical problems.	The cluster topic—using proportional relationships to solve problems—is familiar. It has been a seventh-grade emphasis as long as I've been teaching seventh-grade math. Almost all the types of multistep problems are all familiar. Typically, I use problems about simple interest, tax, markups, markdowns, tips, commissions, fees, and percent increase and decrease. I also ask students to compute some common unit rates, like mph.	Although the topic is familiar, the approaches mentioned are not. I've taught students to set up and solve proportions using cross-multiplication. Graphing on a coordinate plane to determine whether two quantities are proportional is a new idea to me. While I've used multiple representations in my algebra 1 class, I haven't used them for proportional relationships in earlier grades. (7.RP.2.d) Also, I haven't used the vocabulary *constant of proportionality*. (7.RP.2.b)	This cluster is clearly an area of emphasis. I need to understand more about ways students might approach ratio and percent problems if I don't teach them cross-multiplication. Although standard 7.RP.2 is described in considerable detail, our current textbook doesn't approach proportional relationships in that way. I need to figure out how to use or adapt the problems in the book, or find/create problems to teach this new approach.	Geometry: Solving problems involving scale drawings and similar figures Statistics and Probability: Making inferences about a population from a sample or samples Work here is a context for developing many of the Standards for Mathematical Practice, especially Mathematical Practices 1, 2, 4 and 5.