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Developing Proportional Reasoning

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Proportional reasoning is the cornerstone of algebra and upper level mathematics. In the 6th grade students are tasked with developing this new form of thinking to solve problems involving ratios, rates, and proportional relationships. In years past, I have seen my students work through a unit on ratios and proportions and develop nothing more than a set of rules and procedures for identifying and naming ratios and solving for missing values in proportions rather than a more complete understanding of proportional relationships and their significance to problem solving. In this unit I lay out a sequence of essential understandings that are necessary to develop robust and flexible proportional reasoning. To reach these understandings, this unit discusses key strategies students will employ to work through a purposefully sequenced, cohesive set of problems that provide a foundation for students to develop sound proportional reasoning.

(Developed for Mathematics, grade 6; recommended for Mathematics, grades 6-8)

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