Essential Learning from 6th Grade to 7th Grade

(CA Math Framework pg. 319)

For more in-depth examples of tasks, expectations, and student reasoning on these topics, refer to the 6th Grade CA Math Framework at http://www.cde.ca.gov/ci/ma/cf/documents/mathfwgrade6lmg2.pdf

In grades six through eight, multiplication and division develop into powerful forms of ratio and proportional reasoning. The properties of operations take on prominence as students move from arithmetic to algebra. The theme of quantitative relationships also becomes explicit in grades six through eight, developing into the formal notion of a function by grade eight. In addition, the foundations of deductive geometry are laid. The gradual development of data representations in kindergarten through grade five leads to the study of statistics in grades six through eight: evaluation of shape, center, and spread of data distributions; possible associations between two variables; and the use of sampling in making statistical decisions (adapted from PARCC 2012).

To be prepared for grade-seven mathematics, students should be able to demonstrate mastery of particular mathematical concepts and procedural skills by the end of grade six and that they have met the fluency expectations for grade six. The expected fluencies for sixth-grade students are multi-digit whole-number division (6.NS.2) and multi-digit decimal operations (6.NS.3). These fluencies and the conceptual understandings that support them are foundational for work with fractions and decimals in grade seven.

Of particular importance at grade six are skills and understandings of division of fractions by fractions (6.NS.1); an understanding of the system of rational numbers (6.NS.5–8); the ability to use ratio concepts and reasoning to solve problems (6.RP.1–3); the extension of arithmetic to algebraic expressions (6.EE.1–4), including how to reason about and solve one-variable equations and inequalities (6.EE.5–8); and the ability to represent and analyze quantitative relationships between dependent and independent variables (6.EE.1–9).