Mathematics
Grade 6

It is essential that these standards be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations**.**

6.1 Number and Operations: **Develop an understanding of and fluency with multiplication and division of fractions and decimals.**

6.1.1 Select and use appropriate strategies to estimate fraction and decimal products and quotients.
6.1.2 Use and analyze a variety of strategies, including models, for solving problems with multiplication and division of fractions.
6.1.3 Use and analyze a variety of strategies, including models, for solving problems with multiplication and division of decimals.
6.1.4 Develop fluency with efficient procedures for multiplying and dividing fractions and decimals and justify why the procedures work.
6.1.5 Apply the inverse relationship between multiplication and division to make sense of procedures for multiplying and dividing fractions and justify why they work.
6.1.6 Apply the properties of operations to simplify calculations.
6.1.7 Use the relationship between common decimals and fractions to solve problems including problems involving measurement.

6.2 Number and Operations and Probability: **Connect ratio, rate, and percent to multiplication and division.**

6.2.1 Develop, analyze, and apply the meaning of ratio, rate, and percent to solve problems.
6.2.2 Determine decimal and percent equivalents for common fractions, including approximations.
6.2.3 Understand the meaning of probability and represent probabilities as ratios, decimals, and percents.
6.2.4 Determine simple probabilities, both experimental and theoretical.

6.2.5 Develop the concept of π as the ratio of the circumference of a circle to its diameter.

6.3 Algebra: **Write, interpret, and use mathematical expressions and equations.**

6.3.1 Use order of operations to simplify expressions that may include exponents and grouping symbols.
6.3.2 Develop the meanings and uses of variables.
6.3.3 Write, evaluate, and use expressions and formulas to solve problems.
6.3.4 Identify and represent equivalent expressions (e.g., different ways to see a pattern).
6.3.5 Represent, analyze, and determine relationships and patterns using tables, graphs, words and when possible, symbols.
6.3.6 Recognize that the solutions of an equation are the values of the variables that make the equation true.

6.3.7 Solve one-step equations by using number sense, properties of operations, and the idea of maintaining equality on both sides of an equation.