# Grade 7: Concepts and Procedures Target A: Ratios and Proportional Relationships

Student Just Entering **Standard Nearly Met** Should Be Able To:

- Identify proportional relationships presented in equation formats and find unit rates involving whole numbers.

Student Just Entering **Standard Met** Should Be Able To:

- Represent proportional relationships in graphs and tables and solve one-step rate-related problems.

Student Just Entering **Standard Exceeded** Should Be Abe To:

- Solve real-world problems involving proportional relationships that require one step with measurement conversions.

# Grade 7: Concepts and Procedures Target B: The Number System

**Student Just Entering Standard Nearly Met Should Be Able To:**

- Convert between familiar fractions and decimals.

**Student Just Entering Standard Met Should Be Able To:**

- Solve mathematical problems using addition, subtraction, and multiplication on rational numbers.

- Understand that $(-1)(-1) = 1$.

- Convert common fractions and fractions with denominators that are a factor of a power of 10 to decimals.

**Student Just Entering Standard Exceeded Should Be Abe To:**

- Solve real-world problems with integers and proper fractions, using addition, multiplication, subtraction, and division.

# Grade 7: Concepts and Procedures Target C & D: Expressions and Equations

**Student Just Entering Standard Nearly Met Should Be Able To:**

- Apply properties of operations to expand linear expressions with integer coefficients.

- Solve multi-step problems with decimal numbers.

- Solve equations in the form of px + q = r, where p, q, and r are decimal numbers.

**Student Just Entering Standard Met Should Be Able To:**

- Add, subtract, and factor linear expressions with decimal coefficients.

- Graph the solution set to a given inequality in the form of x > p or x < p, where p is a rational number.

- Understand that rewriting an expression can shed light on how quantities are related in a familiar problem-solving context with a moderate degree of scaffolding.

- Use variables to reason with quantities in real-world and mathematical situations with a high degree of scaffolding.

**Student Just Entering Standard Exceeded Should Be Abe To:**

- Construct inequalities with two variables to solve problems.

# Grade 7: Concepts and Procedures Targets E & F: Geometry

**Student Just Entering Standard Nearly Met Should Be Able To:**

- Describe geometric shapes with given conditions.

- Use vertical angles expressed as numerical measurements to solve problems.

- Calculate the area of a circle when the formula is provided and the area of quadrilaterals.

**Student Just Entering Standard Met Should Be Able To:**

- Create a scale drawing of a given figure when a scale factor is given.
- Determine the surface area of a right prism.
- Use vertical angles expressed as variables to solve two-step problems.

**Student Just Entering Standard Exceeded Should Be Abe To:**

- Describe the two-dimensional figures that result from slicing spheres and cones.

# Grade 7: Concepts and Procedures Targets G, H and I: Statistics and Probability

**Student Just Entering Standard Nearly Met Should Be Able To:**

- Determine whether or not a sample is random.

- Find the range of a set of data about a given population.

- Approximate the probability of a chance event by collecting data.

**Student Just Entering Standard Met Should Be Able To:**

- Use random sampling to draw inferences about a population in familiar contexts.
- Informally assess the degree of visual overlap of two numerical data distributions.
- Calculate the theoretical probability of a compound event.

**Student Just Entering Standard Exceeded Should Be Abe To:**

- Generate multiple samples (or simulated samples) of the same size.

- Determine which measures of variability should be used to draw informal comparative inferences about two populations.

- Construct a simulation experiment and generate frequencies for compound events.

# Grade 7: Problem Solving / Modeling and Data Analysis

**Student Just Entering Standard Nearly Met Should Be Able To:**

- Select tools to solve a familiar and moderately scaffolded problem and apply them with partial accuracy.

- Use the necessary elements given in a problem situation to solve a problem.

- Apply mathematics to propose solutions by identifying important quantities and by locating missing information from relevant external resources.

**Student Just Entering Standard Met Should Be Able To:**

- Use appropriate tools to accurately solve problems arising in everyday life, society, and the workplace.

- Apply mathematics to solve problems by identifying important quantities and mapping their relationship and by stating and using logical assumptions.

**Student Just Entering Standard Exceeded Should Be Abe To:**

- Analyze and interpret the context of an unfamiliar situation for problems of increasing complexity.

- Begin to solve problems optimally.

- Construct multiple plausible solutions and approaches.

# Grade 7: Communicating Reasoning

**Student Just Entering Standard Nearly Met Should Be Able To:**

- Find and identify the flaw in an argument.

**Student Just Entering Standard Met Should Be Able To:**

- Use stated assumptions, definitions, and previously established results and examples to identify and repair a flawed argument.

- Use previous information to support his or her own reasoning on a routine problem.

**Student Just Entering Standard Exceeded Should Be Abe To:**

- Begin to construct chains of logic about abstract concepts autonomously.