# Nebraska State Accountability - DRAFT 2018 Math Table of Specifications

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|---|---|---|---|---|---|---|
| **MA 7.1** | **NUMBER: Students will communicate number sense concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.** | **Grade 7 Math Number** | | | | |
| **MA 7.1.1** | **Numeric Relationships: Students will demonstrate, represent, and show relationships among rational numbers within the base-ten number system.** | ***No additional indicator(s) at this level.*** | | | | |
| **MA 7.1.2** | **Operations: Students will compute with rational numbers accurately.** | **Max DOK Level** | **DOK 1** | **DOK 2** | **DOK 3** | **Total Points** |
| **MA 7.1.2.a** | Solve problems using proportions and ratios (e.g., cross products, percents, tables, equations, and graphs). | 2 | | 3 – 5 | | 3 – 5 |
| **MA 7.1.2.b** | Add, subtract, multiply, and divide rational numbers (e.g., positive and negative fractions, decimals, and integers). | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.1.2.c** | Apply properties of operations as strategies for problem solving with rational numbers. | Assessed at the local level | | | | |
| **MA 7.1.2.d** | Use multiple strategies to add, subtract, multiply, and divide integers. | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.1.2.e** | Estimate and check reasonableness of answers using appropriate strategies and tools. | 2 | | 2 – 4 | | 2 – 4 |
| **Grade 7 Number Total** | | **2** | | **11 – 15** | | **11 – 15** |

| MA 7.2 | ALGEBRA: Students will communicate algebraic concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines. | Grade 7 Math Algebra | | | | |
|---|---|---|---|---|---|---|
| **MA 7.2.1** | **Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions, equations, and inequalities.** | **Max DOK Level** | **DOK 1** | **DOK 2** | **DOK 3** | **Total Points** |
| **MA 7.2.1.a** | Describe and create an inequality from words and pictures (e.g., one-step, one-variable). | 2 | 1 – 2 | 1 – 2 | | 2 – 4 |
| **MA 7.2.1.b** | Represent real-world situations with proportions. | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.2.2** | **Algebraic Processes: Students will apply the operational properties when evaluating expressions, and solving equations and inequalities.** | **Max DOK Level** | **DOK 1** | **DOK 2** | **DOK 3** | **Total Points** |
| **MA 7.2.2.a** | Solve equations using the distributive property and combining like terms. | 1 | 1 – 2 | | | 1 – 2 |
| **MA 7.2.2.b** | Use factoring and properties of operations to create equivalent algebraic expressions (e.g., 2x + 6 = 2(x + 3)). | 1 | 1 – 2 | | | 1 – 2 |
| **MA 7.2.2.c** | Given the value of the variable(s), evaluate algebraic expressions (including absolute value). | 1 | 1 – 2 | | | 2 – 4 |
| **MA 7.2.2.d** | Solve two-step equations involving rational numbers which include the integers. | 1 | 1 – 2 | | | 2 – 4 |
| **MA 7.2.2.e** | Solve one-step inequalities involving integers and rational numbers and represent solutions on a number line. | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.2.3** | **Applications: Students will solve real-world problems involving expressions, equations, and inequalities.** | **Max DOK Level** | **DOK 1** | **DOK 2** | **DOK 3** | **Total Points** |
| **MA 7.2.3.a** | Describe and write linear equations from words and tables. | 1 | 1 – 2 | | | 1 – 2 |
| **MA 7.2.3.b** | Write a two-step equation to represent real-world problems involving rational numbers in any form. | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.2.3.c** | Solve real-world problems with equations that involve rational numbers in any form. | 2 | | 1 – 2 | | 1 – 2 |
| **MA 7.2.3.d** | Solve real-world problems with inequalities. | 2 | | 1 – 2 | | 1 – 2 |
| **MA 7.2.3.e** | Use proportional relationships to solve real-world problems, including percent problems, (e.g., % increase, % decrease, mark-up, tip, simple interest). | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.2.3.f** | Solve real-world problems involving scale drawings using a proportional relationship. | 2 | | 2 – 4 | | 2 – 4 |
| **Grade 7 Algebra Total** | | **2** | **6 – 8** | **13 – 15** | | **19 – 22** |

| MA 7.3 | GEOMETRY: Students will communicate geometric concepts and measurement concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines. | Grade 7 Math Geometry | | | | |
|---|---|---|---|---|---|---|
| **MA 7.3.1** | **Characteristics: Students will identify and describe geometric characteristics of two-dimensional shapes.** | **Max DOK Level** | **DOK 1** | **DOK 2** | **DOK 3** | **Total Points** |
| **MA 7.3.1.a** | Apply and use properties of adjacent, complementary, supplementary, and vertical angles to find missing angle measures. | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.3.1.b** | Draw triangles (freehand using a ruler and a protractor, and using technology) with given conditions of three measures of angles or sides, and notice when the conditions determine a unique triangle, more than one triangle, or no triangle. | Assessed at the local level | | | | |
| **MA 7.3.2** | **Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.** | ***No additional indicator(s) at this level.*** | | | | |
| **MA 7.3.3** | **Measurement: Students will perform and compare measurements and apply formulas.** | **Max DOK Level** | **DOK 1** | **DOK 2** | **DOK 3** | **Total Points** |
| **MA 7.3.3.a** | Solve real-world problems involving perimeter and area of composite shapes made from triangles, quadrilaterals and polygons. | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.3.3.b** | Solve real-world problems involving surface area and volume of composite shapes made from rectangular and triangular prisms. | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.3.3.c** | Determine the area and circumference of circles both on and off the coordinate plane. | 2 | | 2 – 4 | | 2 – 4 |
| **Grade 7 Geometry Total** | | **2** | | **11 – 13** | | **11 – 13** |

| MA 7.4 | DATA: Students will communicate data analysis/probability concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines. | Grade 7 Math Data | | | | |
|---|---|---|---|---|---|---|
| **MA 7.4.1** | **Representations: Students will create displays that represent data.** | **Max DOK Level** | **DOK 1** | **DOK 2** | **DOK 3** | **Total Points** |
| **MA 7.4.1.a** | Represent data using circle graphs. | Assessed at the local level | | | | |
| **MA 7.4.2** | **Analysis & Applications: Students will analyze data to address the situation.** | **Max DOK Level** | **DOK 1** | **DOK 2** | **DOK 3** | **Total Points** |
| **MA 7.4.2.a** | Solve problems using information presented in circle graphs. | 2 | | 2 – 4 | | 2 – 4 |
| **MA 7.4.2.b** | Explain the difference between a population and a sample. | Assessed at the local level | | | | |
| **MA 7.4.2.c** | Generate conclusions about a population based upon a random sample. | Assessed at the local level | | | | |
| **MA 7.4.2.d** | Determine and critique biases in different data representations. | Assessed at the local level | | | | |
| **MA 7.4.3** | **Probability: Students will interpret and apply concepts of probability.** | **Max DOK Level** | **DOK 1** | **DOK 2** | **DOK 3** | **Total Points** |
| **MA 7.4.3.a** | Generate a list of possible outcomes for a simple event. | Assessed at the local level | | | | |
| **MA 7.4.3.b** | Describe the theoretical probability of an event using a fraction, percentage, and decimal. | 2 | | 1 – 2 | 0 – 2 | 1 – 3 |
| **MA 7.4.3.c** | Find theoretical probabilities for independent events. | 2 | | 1 – 2 | 0 – 2 | 1 – 3 |
| **MA 7.4.3.d** | Perform simple experiments and express the degree of likelihood (possible, impossible, certain, more likely, equally likely, or less likely); write as fractions and percentages. | Assessed at the local level | | | | |
| **MA 7.4.3.e** | Find experimental probability for independent events. | 2 | | 1 – 2 | 0 – 2 | 1 – 3 |
| **MA 7.4.3.f** | Compare and contrast theoretical and experimental probabilities. | 2 | | 1 – 2 | 0 – 2 | 1 – 3 |
| **MA 7.4.3.g** | Find the probability of dependent compound events. | 2 | | 1 – 2 | 0 – 2 | 1 – 3 |
| **MA 7.4.3.h** | Identify complementary events and calculate their probabilities. | 2 | | 1 – 2 | 0 – 2 | 1 – 3 |
| **Grade 7 Data Total** | | **3** | | **12 – 15** | **0 – 4** | **12 – 16** |