| **Grade** | **Big Idea** | **Essential Questions** | **Concepts** | **Competencies** | **Standard** | **Eligible Content** | **Vocabulary** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **4** | Mathematical relationships among numbers can be represented, compared, and communicated. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.Patterns exhibit relationships that can be extended, described, and generalized. | How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication?How are relationships represented mathematically?What does it mean to estimate or analyze numerical quantities?When is it is appropriate to estimate versus calculate?What makes a tool and/or strategy appropriate for a given task?How can patterns be used to describe relationships in mathematical situations?  | Place Value andProperties of Operations | Demonstrate an understanding of multi-digit whole numbers. Compare and round multi-digit numbers. Perform multi-digit arithmetic.  | CC.2.1.4.B.1 CC.2.1.4.B.2 | M04.A-T.1.1.1 M04.A-T.1.1.2 M04.A-T.1.1.3 M04.A-T.1.1.4 M04.A-T.2.1.1 M04.A-T.2.1.2 M04.A-T.2.1.3 M04.A-T.2.1.4  | Acute AngleAngleDecimalDecimal FractionEquivalenceFactorLineLine of symmetryLine SegmentMixed NumberMultipleObtuse TrianglePointRayRight AngleSymmetryUnit Fraction Weight |
| **4** | Mathematical relationships among numbers can be represented, compared, and communicated. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools. | How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication?How are relationships represented mathematically?What does it mean to estimate or analyze numerical quantities?What makes a tool and/or strategy appropriate for a given task? | Fractions | Demonstrate an understanding of fraction equivalence. Compare and order fractions. Solve problems involving fractions and mixed numbers.  | CC.2.1.4.C.1 CC.2.1.4.C.2 | M04.A-F.1.1.1 M04.A-F.1.1.2 M04.A-F.2.1.1 M04.A-F.2.1.2 M04.A-F.2.1.3 M04.A-F.2.1.4 M04.A-F.2.1.5 M04.A-F.2.1.6 M04.A-F.2.1.7 |  |
| **4** | Mathematical relationships among numbers can be represented, compared, and communicated. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools. | How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication?How are relationships represented mathematically?What does it mean to estimate or analyze numerical quantities?What makes a tool and/or strategy appropriate for a given task? | Decimals | Use decimal notation for decimal fractions.Compare decimal fractions. Compare decimals. | CC.2.1.4.C.3 | M04.A-F.3.1.1 M04.A-F.3.1.2 M04.A-F.3.1.3 |  |
| **4** | Mathematical relationships among numbers can be represented, compared, and communicated. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.Patterns exhibit relationships that can be extended, described, and generalized. | How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication?How are relationships represented mathematically?How can patterns be used to describe relationships in mathematical situations?  | Number Theory | Represent and solve problems verbally as equations. Use factors to represent numbers in various ways. Recognize that a whole number is a multiple of each of its factors. | CC.2.2.4.A.1CC.2.2.4.A.2 | M04.B-O.1.1.1 M04.B-O.1.1.2 M04.B-O.1.1.3 M04.B-O.1.1.4 M04.B-O.2.1.1 |  |
| **4** | Mathematical relationships among numbers can be represented, compared, and communicated. Patterns exhibit relationships that can be extended, described, and generalized.Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.Data can be modeled and used to make inferences. | How is mathematics used to quantify, compare, represent, and model numbers?  How can mathematics support effective communication?How can patterns be used to describe relationships in mathematical situations? How can recognizing repetition or regularity assist in solving problems more efficiently?How can data be organized and represented to provide insight into the relationship between quantities?How can probability and data analysis be used to make predictions? | Patterns | Generate and analyze patterns that follow a single rule.  | CC.2.2.4.A.4 | M04.B-O.3.1.1 M04.B-O.3.1.2 M04.B-O.3.1.3  |  |
| **4** | Patterns exhibit relationships that can be extended, described, and generalized. Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.  | How can patterns be used to describe relationships in mathematical situations? How can recognizing repetition or regularity assist in solving problems more efficiently?How are spatial relationships, including shape and dimension, used to draw, construct, model, and represent real situations or solve problems?How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?How can geometric properties and theorems be used to describe, model, and analyze situations? | Geometric Shapes and Figures | Draw and identify lines and angles. Classify shapes by properties of their lines and angles. Recognize symmetric shapes and draw lines of symmetry.  | CC.2.3.4.A.1 CC.2.3.4.A.2 CC.2.3.4.A.3 | M04.C-G.1.1.1 M04.C-G.1.1.2 M04.C-G.1.1.3  |  |
| **4** | Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools. Measurement attributes can be quantified, and estimated using customary and non-customary units of measure. | What does it mean to estimate or analyze numerical quantities? When is it is appropriate to estimate versus calculate?What makes a tool and/or strategy appropriate for a given task?Why does “what” we measure influence “how” we measure?In what ways are the mathematical attributes of objects or processes measured, calculated and/or interpreted?How precise do measurements and calculations need to be? | Measurement | Solve problems involving measurements. Convert larger unit to smaller unit. Measure and draw angles. Apply area and perimeter formulas. | CC.2.4.4.A.1 CC.2.4.4.A.6 | M04.D-M.1.1.1 M04.D-M.1.1.2 M04.D-M.1.1.3 M04.D-M.1.1.4 M04.D-M.3.1.1 M04.D-M.3.1.2 |  |
| **4** | Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools. Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.Data can be modeled and used to make inferences. | What does it mean to estimate or analyze numerical quantities? What makes a tool and/or strategy appropriate for a given task?How can data be organized and represented to provide insight into the relationship between quantities?How does the type of data influence the choice of display?How can probability and data analysis be used to make predictions? | Data Displays | Translate one type of data display to another. Represent and interpret data involving fractions.  | CC.2.4.4.A.2 CC.2.4.4.A.4  | M04.D-M.2.1.3 M04.D-M.2.1.1 M04.D-M.2.1.2 |  |