# G. Geometry

## A. Draw And Identify Lines And Angles, And Classify Shapes By Properties Of Their Lines And Angles.

**4.G.A.1**

**Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 1 | Geometric Dictation | 4.G.A.1 |
| Stretch 4 | Module 2 | Measuring Angles in Polygonal Paths | 4.G.A.1, 4.G.A.3, 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6 |
| Stretch 5 | Module 3 | Exploring Symmetry in Letters | 4.G.A.1, 4.G.A.3 |
| Stretch 6 | Module 2 | Exploring Geometric Classifications | 4.G.A.1, 4.G.A.2, 4.G.A.3 |
| Stretch 6 | Module 3 | Classifying Geometric Shapes | 4.G.A.1, 4.G.A.2, 4.G.A.3 |

**4.G.A.2**

**Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 5 | Module 2 | Classifying Triangles by Sides and Angles | 4.G.A.2, 4.G.A.3 |
| Stretch 6 | Module 2 | Exploring Geometric Classifications | 4.G.A.1, 4.G.A.2, 4.G.A.3 |
| Stretch 6 | Module 3 | Classifying Geometric Shapes | 4.G.A.1, 4.G.A.2, 4.G.A.3 |

**4.G.A.3**

**Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 2 | Measuring Angles in Polygonal Paths | 4.G.A.1, 4.G.A.3, 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6 |
| Stretch 5 | Module 1 | Investigating Triangles with Geoboards | 4.G.A.3 |
| Stretch 5 | Module 2 | Classifying Triangles by Sides and Angles | 4.G.A.2, 4.G.A.3 |
| Stretch 5 | Module 3 | Exploring Symmetry in Letters | 4.G.A.1, 4.G.A.3 |
| Stretch 5 | Module 4 | Exploring Symmetry and Transformations in the Plane | 4.G.A.3 |
| Stretch 6 | Module 2 | Exploring Geometric Classifications | 4.G.A.1, 4.G.A.2, 4.G.A.3 |
| Stretch 6 | Module 3 | Classifying Geometric Shapes | 4.G.A.1, 4.G.A.2, 4.G.A.3 |

# MD. Measurement and Data

## A. Solve Problems Involving Measurement And Conversion Of Measurements From A Larger Unit To A Smal

**4.MD.A.1**

**Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a twocolumn table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 1 | Measuring Length: Operations with Distance | 4.MD.A.1, 4.MD.A.2 |
| Stretch 1 | Module 2 | Measuring Length: Comparing Heights | 4.MD.A.1, 4.MD.A.2 |
| Stretch 1 | Module 3 | Measuring Weight: Converting Units | 4.MD.A.1 |
| Stretch 1 | Module 4 | Measuring Weight: Calculating Mass | 4.MD.A.1, 4.MD.A.2, 4.OA.A.2 |
| Stretch 2 | Module 3 | Multiplication: Ratio Model I | 4.MD.A.1, 4.MD.A.2, 4.NBT.B.5, 4.OA.A.1, 4.OA.A.2 |
| Stretch 3 | Module 1 | Measuring Capacity: Comparing Volumes | 4.MD.A.1, 4.MD.A.2, 4.OA.C.5 |
| Stretch 3 | Module 2 | Measuring Capacity: Hands-On Experiments | 4.MD.A.1, 4.MD.A.2 |
| Stretch 3 | Module 3 | Telling Time: Reading Analog Clocks | 4.MD.A.1 |
| Stretch 3 | Module 4 | Interpreting Time Intervals | 4.MD.A.1, 4.MD.A.2 |

| | | | |
|---|---|---|---|
| Stretch 3 | Module 5 | Measuring Water Consumption | 4.MD.A.1, 4.MD.A.2, 4.MD.B.4, 4.OA.A.2 |
| Stretch 5 | Module 4 | Multiplication: Unit Conversions | 4.MD.A.1, 4.MD.A.2, 4.OA.A.1, 4.OA.A.2 |
| Stretch 5 | Module 5 | Connecting Multiplication and the Rule of Zeros | 4.MD.A.1, 4.NBT.A.1, 4.NBT.A.2, 4.NBT.B.5, 4.NBT.B.6, 4.OA.A.2 |
| Stretch 5 | Module 5 | Creating Multiplication Word Problems | 4.MD.A.1, 4.OA.A.1, 4.OA.A.2 |

**4.MD.A.2**

**Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 1 | Measuring Length: Operations with Distance | 4.MD.A.1, 4.MD.A.2 |
| Stretch 1 | Module 2 | Measuring Length: Comparing Heights | 4.MD.A.1, 4.MD.A.2 |
| Stretch 1 | Module 4 | Measuring Weight: Calculating Mass | 4.MD.A.1, 4.MD.A.2, 4.OA.A.2 |
| Stretch 2 | Module 3 | Multiplication: Ratio Model I | 4.MD.A.1, 4.MD.A.2, 4.NBT.B.5, 4.OA.A.1, 4.OA.A.2 |
| Stretch 3 | Module 1 | Measuring Capacity: Comparing Volumes | 4.MD.A.1, 4.MD.A.2, 4.OA.C.5 |
| Stretch 3 | Module 2 | Measuring Capacity: Hands-On Experiments | 4.MD.A.1, 4.MD.A.2 |
| Stretch 3 | Module 4 | Interpreting Time Intervals | 4.MD.A.1, 4.MD.A.2 |
| Stretch 3 | Module 5 | Measuring Water Consumption | 4.MD.A.1, 4.MD.A.2, 4.MD.B.4, 4.OA.A.2 |
| Stretch 4 | Module 4 | Exploring Multiples | 4.MD.A.2, 4.OA.B.4, 4.OA.C.5 |
| Stretch 5 | Module 4 | Multiplication: Unit Conversions | 4.MD.A.1, 4.MD.A.2, 4.OA.A.1, 4.OA.A.2 |

**4.MD.A.3**

**Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 3 | Connecting Multiplication and Division | 4.MD.A.3, 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 2 | Module 2 | Area and Perimeter with Pentominoes | 4.MD.A.3 |
| Stretch 2 | Module 3 | Area and Perimeter: Composite Shapes | 4.MD.A.3 |
| Stretch 2 | Module 4 | Area and Perimeter: Chained Challenges | 4.MD.A.3 |
| Stretch 4 | Module 4 | Exploring Factors | 4.MD.A.3, 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 5 | Introducing Prime Numbers | 4.MD.A.3, 4.OA.B.4 |

## B. Represent And Interpret Data.

**4.MD.B.4**

**Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 5 | Representing a Set of Lengths | 4.MD.B.4 |
| Stretch 2 | Module 5 | Representing Data: Playground Design | 4.MD.B.4 |
| Stretch 3 | Module 5 | Measuring Water Consumption | 4.MD.A.1, 4.MD.A.2, 4.MD.B.4, 4.OA.A.2 |
| Stretch 5 | Module 5 | Investigating Data: Measuring Our Cubit | 4.MD.B.4 |

## C. Geometric Measurement: Understand Concepts Of Angle And Measure Angles.

**4.MD.C.5**

**Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 1 | Exploring Angles with Fractional Pieces | 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6, 4.MD.C.7 |
| Stretch 4 | Module 2 | Measuring Angles in Polygonal Paths | 4.G.A.1, 4.G.A.3, 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6 |
| Stretch 4 | Module 3 | Calculating Angles with Pattern Blocks | 4.MD.C.5, 4.MD.C.6, 4.MD.C.7 |
| Stretch 4 | Module 4 | Drawing and Adding Angles | 4.MD.C.5, 4.MD.C.6, 4.MD.C.7 |

**4.MD.C.5a**

**An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 1 | Exploring Angles with Fractional Pieces | 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6, 4.MD.C.7 |
| Stretch 4 | Module 2 | Measuring Angles in Polygonal Paths | 4.G.A.1, 4.G.A.3, 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6 |

**4.MD.C.5b**

**An angle that turns through n one-degree angles is said to have an angle measure of n degrees.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 1 | Exploring Angles with Fractional Pieces | 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6, 4.MD.C.7 |
| Stretch 4 | Module 2 | Measuring Angles in Polygonal Paths | 4.G.A.1, 4.G.A.3, 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6 |

**4.MD.C.6**

**Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 1 | Exploring Angles with Fractional Pieces | 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6, 4.MD.C.7 |
| Stretch 4 | Module 2 | Measuring Angles in Polygonal Paths | 4.G.A.1, 4.G.A.3, 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6 |
| Stretch 4 | Module 3 | Calculating Angles with Pattern Blocks | 4.MD.C.5, 4.MD.C.6, 4.MD.C.7 |
| Stretch 4 | Module 4 | Drawing and Adding Angles | 4.MD.C.5, 4.MD.C.6, 4.MD.C.7 |

**4.MD.C.7**

**Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 1 | Exploring Angles with Fractional Pieces | 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6, 4.MD.C.7 |
| Stretch 4 | Module 3 | Calculating Angles with Pattern Blocks | 4.MD.C.5, 4.MD.C.6, 4.MD.C.7 |
| Stretch 4 | Module 4 | Drawing and Adding Angles | 4.MD.C.5, 4.MD.C.6, 4.MD.C.7 |

## NBT. Number and Operations - Base Ten

### A. Generalize Place Value Understanding For Multi-Digit Whole Numbers.

**4.NBT.A.1**

**Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 1 | Writing Multi-Digit Numbers I | 4.NBT.A.1, 4.NBT.A.2 |
| Stretch 1 | Module 1 | Reviewing Jumping on the Number Line | 4.NBT.A.1, 4.NBT.A.2, 4.NBT.A.3 |
| Stretch 1 | Module 4 | Multiplication through Decomposition I | 4.NBT.A.1, 4.NBT.B.5 |
| Stretch 3 | Module 1 | Writing Multi-Digit Numbers II | 4.NBT.A.1, 4.NBT.A.2, 4.OA.C.5 |
| Stretch 5 | Module 4 | Productive Practice: Addition and Subtraction II | 4.NBT.A.1, 4.NBT.B.4, 4.OA.C.5 |
| Stretch 5 | Module 5 | Connecting Multiplication and the Rule of Zeros | 4.MD.A.1, 4.NBT.A.1, 4.NBT.A.2, 4.NBT.B.5, 4.NBT.B.6, 4.OA.A.2 |

**4.NBT.A.2**

**Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 1 | Writing Multi-Digit Numbers I | 4.NBT.A.1, 4.NBT.A.2 |
| Stretch 1 | Module 1 | Reviewing Jumping on the Number Line | 4.NBT.A.1, 4.NBT.A.2, 4.NBT.A.3 |
| Stretch 2 | Module 5 | Productive Practice: Addition and Subtraction I | 4.NBT.A.2, 4.NBT.B.4, 4.NBT.B.5 |
| Stretch 3 | Module 1 | Writing Multi-Digit Numbers II | 4.NBT.A.1, 4.NBT.A.2, 4.OA.C.5 |
| Stretch 3 | Module 1 | Writing Multi-Digit Numbers III | 4.NBT.A.2, 4.NBT.A.3, 4.OA.C.5 |
| Stretch 5 | Module 1 | Writing Multi-Digit Numbers IV | 4.NBT.A.2, 4.NBT.A.3 |
| Stretch 5 | Module 5 | Connecting Multiplication and the Rule of Zeros | 4.MD.A.1, 4.NBT.A.1, 4.NBT.A.2, 4.NBT.B.5, 4.NBT.B.6, 4.OA.A.2 |
| Stretch 6 | Module 1 | Multiplication through the Standard Algorithm I | 4.NBT.A.2, 4.NBT.B.5, 4.NBT.B.6 |

**4.NBT.A.3**

**Use place value understanding to round multi-digit whole numbers to any place.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 1 | Reviewing Jumping on the Number Line | 4.NBT.A.1, 4.NBT.A.2, 4.NBT.A.3 |
| Stretch 3 | Module 1 | Writing Multi-Digit Numbers III | 4.NBT.A.2, 4.NBT.A.3, 4.OA.C.5 |
| Stretch 4 | Module 3 | Ordering Decimals | 4.NBT.A.3, 4.NF.C.6 |
| Stretch 5 | Module 1 | Writing Multi-Digit Numbers IV | 4.NBT.A.2, 4.NBT.A.3 |
| Stretch 6 | Module 2 | Estimation in Addition, Subtraction & Multiplication | 4.NBT.A.3 |

## B. Use Place Value Understanding And Properties Of Operations To Perform Multi-Digit Arithmetic.

**4.NBT.B.4**

**Fluently add and subtract multi-digit whole numbers using the standard algorithm.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 2 | Using the Standard Addition Algorithm | 4.NBT.B.4, 4.OA.C.5 |
| Stretch 1 | Module 2 | Productive Practice: The Multiplication Table | 4.NBT.B.4, 4.OA.C.5 |
| Stretch 1 | Module 5 | Multiplication through Decomposition II | 4.NBT.B.4, 4.NBT.B.5, 4.OA.C.5 |
| Stretch 2 | Module 1 | Division through Sharing | 4.NBT.B.4, 4.NBT.B.6 |
| Stretch 2 | Module 2 | Productive Practice: Sharing II | 4.NBT.B.4, 4.NBT.B.5, 4.NBT.B.6, 4.OA.C.5 |
| Stretch 2 | Module 2 | Productive Practice: Factors up to 1,000 | 4.NBT.B.4, 4.NBT.B.5, 4.OA.C.5 |
| Stretch 2 | Module 2 | Multi-Step Word Problems I | 4.NBT.B.4, 4.OA.A.3 |
| Stretch 2 | Module 5 | Productive Practice: Addition and Subtraction I | 4.NBT.A.2, 4.NBT.B.4, 4.NBT.B.5 |
| Stretch 3 | Module 1 | Estimation in Addition and Subtraction | 4.NBT.B.4 |

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|---|---|---|---|
| Stretch 3 | Module 2 | Multiplication through Decomposition III | 4.NBT.B.4, 4.NBT.B.5 |
| Stretch 3 | Module 3 | Connecting Multiplication II | 4.NBT.B.4, 4.NBT.B.5 |
| Stretch 3 | Module 3 | Multiplication through Decomposition IV | 4.NBT.B.4, 4.NBT.B.5 |
| Stretch 3 | Module 5 | Productive Practice: Multiplication | 4.NBT.B.4, 4.NBT.B.5, 4.OA.C.5 |
| Stretch 5 | Module 4 | Productive Practice: Addition and Subtraction II | 4.NBT.A.1, 4.NBT.B.4, 4.OA.C.5 |
| Stretch 6 | Module 5 | Productive Practice: Addition on Magic Squares | 4.NBT.B.4, 4.OA.C.5 |

### 4.NBT.B.5

**Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 3 | Connecting Multiplication and Division | 4.MD.A.3, 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 1 | Module 4 | Multiplication through Decomposition I | 4.NBT.A.1, 4.NBT.B.5 |
| Stretch 1 | Module 4 | Connecting Multiplication I | 4.NBT.B.5 |
| Stretch 1 | Module 4 | Multiplication: Equal Groups Model | 4.NBT.B.5, 4.OA.A.3 |
| Stretch 1 | Module 5 | Multiplication through Decomposition II | 4.NBT.B.4, 4.NBT.B.5, 4.OA.C.5 |
| Stretch 1 | Module 5 | Estimation in Addition and Multiplication | 4.NBT.B.5 |
| Stretch 2 | Module 2 | Productive Practice: Sharing II | 4.NBT.B.4, 4.NBT.B.5, 4.NBT.B.6, 4.OA.C.5 |
| Stretch 2 | Module 2 | Productive Practice: Factors up to 1,000 | 4.NBT.B.4, 4.NBT.B.5, 4.OA.C.5 |
| Stretch 2 | Module 3 | Multiplication: Ratio Model I | 4.MD.A.1, 4.MD.A.2, 4.NBT.B.5, 4.OA.A.1, 4.OA.A.2 |
| Stretch 2 | Module 5 | Productive Practice: Addition and Subtraction I | 4.NBT.A.2, 4.NBT.B.4, 4.NBT.B.5 |
| Stretch 3 | Module 2 | Productive Practice: Cascade Multiplication | 4.NBT.B.5 |
| Stretch 3 | Module 2 | Multiplication through Decomposition III | 4.NBT.B.4, 4.NBT.B.5 |
| Stretch 3 | Module 3 | Connecting Multiplication II | 4.NBT.B.4, 4.NBT.B.5 |
| Stretch 3 | Module 3 | Exploring Multiplication and the Rule of Zeros | 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 3 | Module 3 | Multiplication through Decomposition IV | 4.NBT.B.4, 4.NBT.B.5 |
| Stretch 3 | Module 4 | Operations with Calculator I | 4.NBT.B.5, 4.OA.C.5 |
| Stretch 3 | Module 5 | Division by Decomposition (With Remainders) | 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 3 | Module 5 | Productive Practice: Multiplication | 4.NBT.B.4, 4.NBT.B.5, 4.OA.C.5 |
| Stretch 4 | Module 5 | Exploring Prime Numbers | 4.NBT.B.5, 4.OA.B.4, 4.OA.C.5 |
| Stretch 5 | Module 5 | Connecting Multiplication and the Rule of Zeros | 4.MD.A.1, 4.NBT.A.1, 4.NBT.A.2, 4.NBT.B.5, 4.NBT.B.6, 4.OA.A.2 |
| Stretch 5 | Module 5 | Multiplication through Decomposition V | 4.NBT.B.5, 4.OA.A.3 |
| Stretch 6 | Module 1 | Productive Practice: Kaprekar Numbers | 4.NBT.B.5 |
| Stretch 6 | Module 1 | Multiplication through the Standard Algorithm I | 4.NBT.A.2, 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 6 | Module 1 | Multiplication through the Standard Algorithm II | 4.NBT.B.5, 4.OA.C.5 |
| Stretch 6 | Module 2 | Productive Practice: Multiplication Table | 4.NBT.B.5 |
| Stretch 6 | Module 2 | Connecting Multiplication III | 4.NBT.B.5 |
| Stretch 6 | Module 3 | Division by Decomposition (No Remainders) | 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 6 | Module 4 | Estimation in All Four Operations | 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 6 | Module 4 | Operations with Calculator II | 4.NBT.B.5, 4.NBT.B.6, 4.OA.C.5 |
| Stretch 6 | Module 5 | Productive Practice: Doubling | 4.NBT.B.5, 4.OA.C.5 |

### 4.NBT.B.6

**Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 3 | Comparing Quotitive and Partitive Division | 4.NBT.B.6 |
| Stretch 1 | Module 3 | Connecting Multiplication and Division | 4.MD.A.3, 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 2 | Module 1 | Division through Sharing | 4.NBT.B.4, 4.NBT.B.6 |

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|---|---|---|---|
| Stretch 2 | Module 1 | Division Word Problems | 4.NBT.B.6, 4.OA.A.3 |
| Stretch 2 | Module 1 | Productive Practice: Sharing I | 4.NBT.B.6 |
| Stretch 2 | Module 2 | Productive Practice: Sharing II | 4.NBT.B.4, 4.NBT.B.5, 4.NBT.B.6, 4.OA.C.5 |
| Stretch 3 | Module 3 | Exploring Multiplication and the Rule of Zeros | 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 3 | Module 4 | Productive Practice: Sharing III | 4.NBT.B.6, 4.OA.C.5 |
| Stretch 3 | Module 4 | Connecting Division | 4.NBT.B.6 |
| Stretch 3 | Module 5 | Division by Decomposition (With Remainders) | 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 3 | Module 5 | Multi-Step Word Problems II | 4.NBT.B.6, 4.OA.A.3 |
| Stretch 5 | Module 5 | Connecting Multiplication and the Rule of Zeros | 4.MD.A.1, 4.NBT.A.1, 4.NBT.A.2, 4.NBT.B.5, 4.NBT.B.6, 4.OA.A.2 |
| Stretch 6 | Module 1 | Multiplication through the Standard Algorithm I | 4.NBT.A.2, 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 6 | Module 3 | Division by Decomposition (No Remainders) | 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 6 | Module 3 | Comparing Division Strategies | 4.NBT.B.6 |
| Stretch 6 | Module 4 | Productive Practice: Division | 4.NBT.B.6, 4.OA.C.5 |
| Stretch 6 | Module 4 | Estimation in All Four Operations | 4.NBT.B.5, 4.NBT.B.6 |
| Stretch 6 | Module 4 | Operations with Calculator II | 4.NBT.B.5, 4.NBT.B.6, 4.OA.C.5 |
| Stretch 6 | Module 5 | Multi-Step Word Problems III | 4.NBT.B.6, 4.OA.A.3 |

# NF. Number and Operations - Fractions

## A. Extend Understanding Of Fraction Equivalence And Ordering.

**4.NF.A.1**

**Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 3 | Reviewing Fraction Representation | 4.NF.A.1, 4.NF.A.2 |
| Stretch 2 | Module 3 | Representing and Decomposing Fractions | 4.NF.A.1, 4.NF.B.3a, 4.NF.B.3b, 4.OA.C.5 |
| Stretch 4 | Module 1 | Reviewing Fractions on the Number Line | 4.NF.A.1, 4.NF.B.3b, 4.NF.B.3c, 4.NF.B.3d, 4.OA.C.5 |
| Stretch 4 | Module 2 | Introducing Decimals and Decimal Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.C.5 |
| Stretch 4 | Module 2 | Fractions and Decimals on the Number Line | 4.NF.A.1 |
| Stretch 5 | Module 1 | Equivalent Fractions with the Area Model | 4.NF.A.1, 4.NF.B.4a, 4.NF.B.4b |
| Stretch 5 | Module 1 | Equivalent Fractions with the Length Model | 4.NF.A.1 |
| Stretch 5 | Module 2 | Comparing Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.C.7 |
| Stretch 5 | Module 2 | Comparing and Converting Fractions | 4.NF.A.1, 4.NF.A.2, 4.OA.B.4 |
| Stretch 5 | Module 2 | Ordering Fractions with Different Strategies | 4.NF.A.1, 4.NF.A.2 |
| Stretch 5 | Module 3 | Comparing Decimal Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.B.4b, 4.NF.C.6, 4.NF.C.7 |
| Stretch 5 | Module 3 | Applying Fractions | 4.NF.A.1, 4.NF.A.2 |

**4.NF.A.2**

**Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 3 | Reviewing Fraction Representation | 4.NF.A.1, 4.NF.A.2 |
| Stretch 4 | Module 1 | Practicing Fraction Addition and Subtraction | 4.NF.A.2, 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.3c |
| Stretch 4 | Module 2 | Introducing Decimals and Decimal Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.C.5 |
| Stretch 4 | Module 5 | Representing Population Data | 4.NF.A.2 |
| Stretch 5 | Module 2 | Comparing Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.C.7 |
| Stretch 5 | Module 2 | Comparing and Converting Fractions | 4.NF.A.1, 4.NF.A.2, 4.OA.B.4 |
| Stretch 5 | Module 2 | Ordering Fractions with Different Strategies | 4.NF.A.1, 4.NF.A.2 |
| Stretch 5 | Module 3 | Comparing Decimal Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.B.4b, 4.NF.C.6, 4.NF.C.7 |

| | | | |
|---|---|---|---|
| Stretch 5 | Module 3 | Applying Fractions | 4.NF.A.1, 4.NF.A.2 |

## B. Build Fractions From Unit Fractions By Applying And Extending Previous Understandings Of Operations O

**4.NF.B.3**

**Understand a fraction a/b with a > 1 as a sum of fractions 1/b.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 3 | Representing and Decomposing Fractions | 4.NF.A.1, 4.NF.B.3a, 4.NF.B.3b, 4.OA.C.5 |
| Stretch 2 | Module 4 | Adding Fractions | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 2 | Module 4 | Subtracting Fractions | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 2 | Module 4 | Adding and Subtracting Mixed Numbers | 4.NF.B.3a, 4.NF.B.3c |
| Stretch 2 | Module 5 | Multiplying Fractions I | 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.4a, 4.NF.B.4b |
| Stretch 2 | Module 5 | Fraction Multiplication Word Problems | 4.NF.B.3c, 4.NF.B.3d, 4.NF.B.4b, 4.NF.B.4c |
| Stretch 4 | Module 1 | Reviewing Fractions on the Number Line | 4.NF.A.1, 4.NF.B.3b, 4.NF.B.3c, 4.NF.B.3d, 4.OA.C.5 |
| Stretch 4 | Module 1 | Add and Subtract Fractions on the Number Line | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 4 | Module 1 | Practicing Fraction Addition and Subtraction | 4.NF.A.2, 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.3c |
| Stretch 5 | Module 3 | Adding Decimal Fractions | 4.NF.B.3a, 4.NF.B.3d, 4.NF.C.5 |

**4.NF.B.3a**

**Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 3 | Representing and Decomposing Fractions | 4.NF.A.1, 4.NF.B.3a, 4.NF.B.3b, 4.OA.C.5 |
| Stretch 2 | Module 4 | Adding Fractions | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 2 | Module 4 | Subtracting Fractions | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 2 | Module 4 | Adding and Subtracting Mixed Numbers | 4.NF.B.3a, 4.NF.B.3c |
| Stretch 2 | Module 5 | Multiplying Fractions I | 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.4a, 4.NF.B.4b |
| Stretch 4 | Module 1 | Add and Subtract Fractions on the Number Line | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 4 | Module 1 | Practicing Fraction Addition and Subtraction | 4.NF.A.2, 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.3c |
| Stretch 5 | Module 3 | Adding Decimal Fractions | 4.NF.B.3a, 4.NF.B.3d, 4.NF.C.5 |

**4.NF.B.3b**

**Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 3 | Representing and Decomposing Fractions | 4.NF.A.1, 4.NF.B.3a, 4.NF.B.3b, 4.OA.C.5 |
| Stretch 2 | Module 5 | Multiplying Fractions I | 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.4a, 4.NF.B.4b |
| Stretch 4 | Module 1 | Reviewing Fractions on the Number Line | 4.NF.A.1, 4.NF.B.3b, 4.NF.B.3c, 4.NF.B.3d, 4.OA.C.5 |
| Stretch 4 | Module 1 | Practicing Fraction Addition and Subtraction | 4.NF.A.2, 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.3c |

**4.NF.B.3c**

**Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Stretch 2 | Module 4 | Adding Fractions | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 2 | Module 4 | Subtracting Fractions | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 2 | Module 4 | Adding and Subtracting Mixed Numbers | 4.NF.B.3a, 4.NF.B.3c |
| Stretch 2 | Module 5 | Fraction Multiplication Word Problems | 4.NF.B.3c, 4.NF.B.3d, 4.NF.B.4b, 4.NF.B.4c |
| Stretch 4 | Module 1 | Reviewing Fractions on the Number Line | 4.NF.A.1, 4.NF.B.3b, 4.NF.B.3c, 4.NF.B.3d, 4.OA.C.5 |
| Stretch 4 | Module 1 | Add and Subtract Fractions on the Number Line | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 4 | Module 1 | Practicing Fraction Addition and Subtraction | 4.NF.A.2, 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.3c |

**4.NF.B.3d**

**Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 4 | Adding Fractions | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 2 | Module 4 | Subtracting Fractions | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 2 | Module 5 | Fraction Multiplication Word Problems | 4.NF.B.3c, 4.NF.B.3d, 4.NF.B.4b, 4.NF.B.4c |
| Stretch 4 | Module 1 | Reviewing Fractions on the Number Line | 4.NF.A.1, 4.NF.B.3b, 4.NF.B.3c, 4.NF.B.3d, 4.OA.C.5 |
| Stretch 4 | Module 1 | Add and Subtract Fractions on the Number Line | 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d |
| Stretch 5 | Module 3 | Adding Decimal Fractions | 4.NF.B.3a, 4.NF.B.3d, 4.NF.C.5 |

**4.NF.B.4**

**Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 5 | Multiplying Fractions I | 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.4a, 4.NF.B.4b |
| Stretch 2 | Module 5 | Fraction Multiplication Word Problems | 4.NF.B.3c, 4.NF.B.3d, 4.NF.B.4b, 4.NF.B.4c |
| Stretch 4 | Module 2 | Multiplying Fractions II | 4.NF.B.4b, 4.NF.B.4c |
| Stretch 5 | Module 1 | Equivalent Fractions with the Area Model | 4.NF.A.1, 4.NF.B.4a, 4.NF.B.4b |
| Stretch 5 | Module 3 | Comparing Decimal Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.B.4b, 4.NF.C.6, 4.NF.C.7 |

**4.NF.B.4a**

**Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 5 | Multiplying Fractions I | 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.4a, 4.NF.B.4b |
| Stretch 5 | Module 1 | Equivalent Fractions with the Area Model | 4.NF.A.1, 4.NF.B.4a, 4.NF.B.4b |

**4.NF.B.4b**

**Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 5 | Multiplying Fractions I | 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.4a, 4.NF.B.4b |
| Stretch 2 | Module 5 | Fraction Multiplication Word Problems | 4.NF.B.3c, 4.NF.B.3d, 4.NF.B.4b, 4.NF.B.4c |
| Stretch 4 | Module 2 | Multiplying Fractions II | 4.NF.B.4b, 4.NF.B.4c |
| Stretch 5 | Module 1 | Equivalent Fractions with the Area Model | 4.NF.A.1, 4.NF.B.4a, 4.NF.B.4b |

| | | | |
|---|---|---|---|
| Stretch 5 | Module 3 | Comparing Decimal Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.B.4b, 4.NF.C.6, 4.NF.C.7 |

**4.NF.B.4c**

**Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many Pounds of roast beef will be needed? Between what two whole numbers does your answer lie?**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 5 | Fraction Multiplication Word Problems | 4.NF.B.3c, 4.NF.B.3d, 4.NF.B.4b, 4.NF.B.4c |
| Stretch 4 | Module 2 | Multiplying Fractions II | 4.NF.B.4b, 4.NF.B.4c |

### C. Understand Decimal Notation For Fractions, And Compare Decimal Fractions.

**4.NF.C.5**

**Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 2 | Introducing Decimals and Decimal Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.C.5 |
| Stretch 5 | Module 3 | Adding Decimal Fractions | 4.NF.B.3a, 4.NF.B.3d, 4.NF.C.5 |

**4.NF.C.6**

**Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 3 | Ordering Decimals | 4.NBT.A.3, 4.NF.C.6 |
| Stretch 4 | Module 3 | Practicing Fractions and Decimals | 4.NF.C.6, 4.NF.C.7 |
| Stretch 5 | Module 3 | Comparing Decimal Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.B.4b, 4.NF.C.6, 4.NF.C.7 |

**4.NF.C.7**

**Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 3 | Practicing Fractions and Decimals | 4.NF.C.6, 4.NF.C.7 |
| Stretch 5 | Module 2 | Comparing Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.C.7 |
| Stretch 5 | Module 3 | Comparing Decimal Fractions | 4.NF.A.1, 4.NF.A.2, 4.NF.B.4b, 4.NF.C.6, 4.NF.C.7 |

## OA. Operations and Algebraic Thinking

### A. Use The Four Operations With Whole Numbers To Solve Problems.

**4.OA.A.1**

**Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 2 | Module 3 | Multiplication: Ratio Model I | 4.MD.A.1, 4.MD.A.2, 4.NBT.B.5, 4.OA.A.1, 4.OA.A.2 |
| Stretch 3 | Module 2 | Multiplication: Comparison Model | 4.OA.A.1, 4.OA.A.2 |
| Stretch 5 | Module 4 | Multiplication: Ratio Model II | 4.OA.A.1, 4.OA.A.2 |
| Stretch 5 | Module 4 | Multiplication: Unit Conversions | 4.MD.A.1, 4.MD.A.2, 4.OA.A.1, 4.OA.A.2 |
| Stretch 5 | Module 5 | Creating Multiplication Word Problems | 4.MD.A.1, 4.OA.A.1, 4.OA.A.2 |

**4.OA.A.2**

**Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 4 | Measuring Weight: Calculating Mass | 4.MD.A.1, 4.MD.A.2, 4.OA.A.2 |
| Stretch 2 | Module 3 | Multiplication: Ratio Model I | 4.MD.A.1, 4.MD.A.2, 4.NBT.B.5, 4.OA.A.1, 4.OA.A.2 |
| Stretch 3 | Module 2 | Multiplication: Comparison Model | 4.OA.A.1, 4.OA.A.2 |
| Stretch 3 | Module 5 | Measuring Water Consumption | 4.MD.A.1, 4.MD.A.2, 4.MD.B.4, 4.OA.A.2 |
| Stretch 5 | Module 4 | Multiplication: Ratio Model II | 4.OA.A.1, 4.OA.A.2 |
| Stretch 5 | Module 4 | Multiplication: Unit Conversions | 4.MD.A.1, 4.MD.A.2, 4.OA.A.1, 4.OA.A.2 |
| Stretch 5 | Module 5 | Connecting Multiplication and the Rule of Zeros | 4.MD.A.1, 4.NBT.A.1, 4.NBT.A.2, 4.NBT.B.5, 4.NBT.B.6, 4.OA.A.2 |
| Stretch 5 | Module 5 | Creating Multiplication Word Problems | 4.MD.A.1, 4.OA.A.1, 4.OA.A.2 |
| Stretch 6 | Module 3 | Multiplication and Division Word Problems | 4.OA.A.2 |

**4.OA.A.3**

**Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 4 | Multiplication: Equal Groups Model | 4.NBT.B.5, 4.OA.A.3 |
| Stretch 2 | Module 1 | Division Word Problems | 4.NBT.B.6, 4.OA.A.3 |
| Stretch 2 | Module 2 | Multi-Step Word Problems I | 4.NBT.B.4, 4.OA.A.3 |
| Stretch 3 | Module 5 | Multi-Step Word Problems II | 4.NBT.B.6, 4.OA.A.3 |
| Stretch 5 | Module 5 | Multiplication through Decomposition V | 4.NBT.B.5, 4.OA.A.3 |
| Stretch 6 | Module 5 | Multi-Step Word Problems III | 4.NBT.B.6, 4.OA.A.3 |

## B. Gain Familiarity With Factors And Multiples.

**4.OA.B.4**

**Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 4 | Module 3 | Introducing Multiples | 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 4 | Exploring Multiples | 4.MD.A.2, 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 4 | Introducing Factors | 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 4 | Exploring Factors | 4.MD.A.3, 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 5 | Introducing Prime Numbers | 4.MD.A.3, 4.OA.B.4 |
| Stretch 4 | Module 5 | Exploring Prime Numbers | 4.NBT.B.5, 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 5 | Productive Practice: Prime Numbers | 4.OA.B.4 |
| Stretch 5 | Module 2 | Comparing and Converting Fractions | 4.NF.A.1, 4.NF.A.2, 4.OA.B.4 |
| Stretch 6 | Module 1 | Curved Patterns: Mathematical Sculpture | 4.OA.B.4, 4.OA.C.5 |

## C. Generate And Analyze Patterns.

**4.OA.C.5**

**Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.**

| Stretch | Module | Session Title | Standards |
|---|---|---|---|
| Stretch 1 | Module 1 | Productive Practice: Addition Table | 4.OA.C.5 |
| Stretch 1 | Module 2 | Using the Standard Addition Algorithm | 4.NBT.B.4, 4.OA.C.5 |

| | | | |
|---|---|---|---|
| Stretch 1 | Module 2 | Using the Standard Subtraction Algorithm | 4.OA.C.5 |
| Stretch 1 | Module 2 | Productive Practice: The Multiplication Table | 4.NBT.B.4, 4.OA.C.5 |
| Stretch 1 | Module 5 | Multiplication through Decomposition II | 4.NBT.B.4, 4.NBT.B.5, 4.OA.C.5 |
| Stretch 2 | Module 2 | Productive Practice: Sharing II | 4.NBT.B.4, 4.NBT.B.5, 4.NBT.B.6, 4.OA.C.5 |
| Stretch 2 | Module 2 | Productive Practice: Factors up to 1,000 | 4.NBT.B.4, 4.NBT.B.5, 4.OA.C.5 |
| Stretch 2 | Module 3 | Representing and Decomposing Fractions | 4.NF.A.1, 4.NF.B.3a, 4.NF.B.3b, 4.OA.C.5 |
| Stretch 3 | Module 1 | Writing Multi-Digit Numbers II | 4.NBT.A.1, 4.NBT.A.2, 4.OA.C.5 |
| Stretch 3 | Module 1 | Writing Multi-Digit Numbers III | 4.NBT.A.2, 4.NBT.A.3, 4.OA.C.5 |
| Stretch 3 | Module 1 | Measuring Capacity: Comparing Volumes | 4.MD.A.1, 4.MD.A.2, 4.OA.C.5 |
| Stretch 3 | Module 4 | Operations with Calculator I | 4.NBT.B.5, 4.OA.C.5 |
| Stretch 3 | Module 4 | Productive Practice: Sharing III | 4.NBT.B.6, 4.OA.C.5 |
| Stretch 3 | Module 5 | Productive Practice: Multiplication | 4.NBT.B.4, 4.NBT.B.5, 4.OA.C.5 |
| Stretch 4 | Module 1 | Reviewing Fractions on the Number Line | 4.NF.A.1, 4.NF.B.3b, 4.NF.B.3c, 4.NF.B.3d, 4.OA.C.5 |
| Stretch 4 | Module 3 | Introducing Multiples | 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 4 | Exploring Multiples | 4.MD.A.2, 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 4 | Introducing Factors | 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 4 | Exploring Factors | 4.MD.A.3, 4.OA.B.4, 4.OA.C.5 |
| Stretch 4 | Module 5 | Exploring Prime Numbers | 4.NBT.B.5, 4.OA.B.4, 4.OA.C.5 |
| Stretch 5 | Module 4 | Productive Practice: Addition and Subtraction II | 4.NBT.A.1, 4.NBT.B.4, 4.OA.C.5 |
| Stretch 6 | Module 1 | Multiplication through the Standard Algorithm II | 4.NBT.B.5, 4.OA.C.5 |
| Stretch 6 | Module 1 | Curved Patterns: Mathematical Sculpture | 4.OA.B.4, 4.OA.C.5 |
| Stretch 6 | Module 4 | Productive Practice: Division | 4.NBT.B.6, 4.OA.C.5 |
| Stretch 6 | Module 4 | Operations with Calculator II | 4.NBT.B.5, 4.NBT.B.6, 4.OA.C.5 |
| Stretch 6 | Module 4 | Discovering Number Patterns | 4.OA.C.5 |
| Stretch 6 | Module 5 | Productive Practice: Doubling | 4.NBT.B.5, 4.OA.C.5 |
| Stretch 6 | Module 5 | Productive Practice: Addition on Magic Squares | 4.NBT.B.4, 4.OA.C.5 |
| Stretch 6 | Module 5 | Creating Geometric Sequences | 4.OA.C.5 |