This document identifies bridging standards in the 2016 *Mathematics Standards of Learning.* Bridging standards allow for the identification of content that can be connected when planning instruction and promote deeper student understanding.

Bridge icon Bridging standards (indicated by bold text in the grade level column below) are ones that meet one or more of the following criteria:

* Functions as a bridge to which other content within the grade level/course is connected, either horizontally or vertically;
* Serves as prerequisite knowledge for content to be addressed in future grade levels/courses; or
* Possesses endurance beyond a single unit of instruction within a grade level/course.

The selection of content focus areas, potential connections, and the sequencing of content in this document serve as examples only and are intended to assist with curricular development.

| **Grade 6 Content Focus Areas** | **Prerequisite Knowledge (Linked to JIT  Quick Checks)**  **Grade 4** | **Prerequisite Knowledge (Linked to JIT  Quick Checks)**  **Grade 5** | **Grade 6**  **(Linked to Just in Time Mathematics Quick Checks)** | **-** | **Possible Grade 6**  **Connections Across Content Focus Areas** | **Possible Future Grade Level/Course Content Connections** |
| --- | --- | --- | --- | --- | --- | --- |
|  | [4.2b](https://www.doe.virginia.gov/home/showpublisheddocument/24716/), [4.3a](https://www.doe.virginia.gov/home/showpublisheddocument/24724/), [4.3d](https://www.doe.virginia.gov/home/showpublisheddocument/24736/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/) | [**6.3a**](https://www.doe.virginia.gov/home/showpublisheddocument/33263/) **Identify and represent integers** |  |  |  |
|  | [4.1b](https://www.doe.virginia.gov/home/showpublisheddocument/24704/), [4.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24712/), [4.3c](https://www.doe.virginia.gov/home/showpublisheddocument/24732/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/), [5.2b](https://www.doe.virginia.gov/home/showpublisheddocument/24858/) | [**6.3b**](https://www.doe.virginia.gov/home/showpublisheddocument/25004/) **Compare and order integers** |  | Compare and Order Positive Rational Numbers | Compare and Order Rational Numbers  (Grade 7) |
|  |  |  | [6.3c](https://www.doe.virginia.gov/home/showpublisheddocument/25008/) Identify and describe absolute value of integers |  |  | Absolute Value of Rational Numbers  (Grade 7) |
|  | [4.4a](https://www.doe.virginia.gov/home/showpublisheddocument/24740/) | [5.4](https://www.doe.virginia.gov/home/showpublisheddocument/24870/) | [**6.6a**](https://www.doe.virginia.gov/home/showpublisheddocument/25028/) **Add, subtract, multiply, and divide integers** |  | Solving Equations and Inequalities | Solve  Practical Problems with Rational Numbers (Grade 7) |
| **Applying Integer Concepts and Operations** | [4.4d](https://www.doe.virginia.gov/home/showpublisheddocument/24752/) | [5.4](https://www.doe.virginia.gov/home/showpublisheddocument/24870/) | [**6.6b**](https://www.doe.virginia.gov/home/showpublisheddocument/25032/) **Solve practical problems involving operations with integers** |  | Solving Equations and Inequalities | Solve  Practical Problems with Rational Numbers (Grade 7) |
|  | [4.4b](https://www.doe.virginia.gov/home/showpublisheddocument/24744/), [4.4c](https://www.doe.virginia.gov/home/showpublisheddocument/24748/) | [5.7](https://www.doe.virginia.gov/home/showpublisheddocument/24890/) | [6.6c](https://www.doe.virginia.gov/home/showpublisheddocument/25036/) Simplify numerical expressions involving integers |  |  | Evaluating Algebraic Expressions  (Grade 7) |
|  |  |  | [**6.8a**](https://www.doe.virginia.gov/home/showpublisheddocument/25072/) **Identify the components of the coordinate plane** |  |  | Graphing Linear Equations  (Grade 7) |
|  |  | [5.14a](https://www.doe.virginia.gov/home/showpublisheddocument/24930/) | [**6.8b**](https://www.doe.virginia.gov/home/showpublisheddocument/25076/) **Identify the coordinates of a point and graph ordered pairs in a coordinate plane** |  | Proportional Relationship Representations | Graphing Linear Equations  (Grade 7) |
|  | [4.15](https://www.doe.virginia.gov/home/showpublisheddocument/24840/) | [5.18](https://www.doe.virginia.gov/home/showpublisheddocument/24970/) | [6.4](https://www.doe.virginia.gov/home/showpublisheddocument/25012/) Recognize and represent patterns with whole number exponents and perfect squares |  |  | Negative Exponents and Square Roots  (Grade 7) |
|  | [4.2b](https://www.doe.virginia.gov/home/showpublisheddocument/24716/), [4.2c](https://www.doe.virginia.gov/home/showpublisheddocument/24720/), [4.3a](https://www.doe.virginia.gov/home/showpublisheddocument/24724/), [4.3d](https://www.doe.virginia.gov/home/showpublisheddocument/24736/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/) | [**6.2a**](https://www.doe.virginia.gov/home/showpublisheddocument/24994/) **Represent and determine equivalencies among fractions, mixed numbers, decimals, and percents** |  | Ratios | Compare and Order Rational Numbers  (Grade 7) |
|  | [4.1b](https://www.doe.virginia.gov/home/showpublisheddocument/24704/), [4.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24712/), [4.2b](https://www.doe.virginia.gov/home/showpublisheddocument/24716/), [4.2c](https://www.doe.virginia.gov/home/showpublisheddocument/24720/), [4.3a](https://www.doe.virginia.gov/home/showpublisheddocument/24724/), [4.3c](https://www.doe.virginia.gov/home/showpublisheddocument/24732/), [4.3d](https://www.doe.virginia.gov/home/showpublisheddocument/24736/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/), [5.2b](https://www.doe.virginia.gov/home/showpublisheddocument/24858/) | [**6.2b**](https://www.doe.virginia.gov/home/showpublisheddocument/24998/) **Compare and order positive rational numbers** |  | Compare and Order Integers | Compare and Order Rational Numbers  (Grade 7) |
| **Using Fraction, Decimal, and Percent Connections and Operations** | [4.5a](https://www.doe.virginia.gov/home/showpublisheddocument/24756/), [4.5b](https://www.doe.virginia.gov/home/showpublisheddocument/24780/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/), [5.5a](https://www.doe.virginia.gov/home/showpublisheddocument/24874/), [5.6b](https://www.doe.virginia.gov/home/showpublisheddocument/24886/) | [**6.5a**](https://www.doe.virginia.gov/home/showpublisheddocument/25016/) **Multiply and divide fra6.ctions and mixed numbers** |  | Circumference, Area, and Perimeter | Solve Practical Problems with Rational Numbers  (Grade 7) |
|  | [4.4d](https://www.doe.virginia.gov/home/showpublisheddocument/24752/), [4.5c](https://www.doe.virginia.gov/home/showpublisheddocument/24786/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/), [5.5a](https://www.doe.virginia.gov/home/showpublisheddocument/24874/), [5.6b](https://www.doe.virginia.gov/home/showpublisheddocument/24886/) | [**6.5b**](https://www.doe.virginia.gov/home/showpublisheddocument/25020/) **Solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions** |  | Circumference, Area, and Perimeter | Solve Practical Problems with Rational Numbers  (Grade 7) |
|  | [4.6b](https://www.doe.virginia.gov/home/showpublisheddocument/24792/), [4.5c](https://www.doe.virginia.gov/home/showpublisheddocument/24786/) | [5.6a](https://www.doe.virginia.gov/home/showpublisheddocument/24882/), [5.6b](https://www.doe.virginia.gov/home/showpublisheddocument/24886/), [5.5b](https://www.doe.virginia.gov/home/showpublisheddocument/24878/) | [**6.5c**](https://www.doe.virginia.gov/home/showpublisheddocument/25024/) **Solve multistep practical problems involving addition, subtraction, multiplication and division of decimals.** |  | Circumference, Area, and Perimeter | Solve Practical Problems with Rational Numbers  (Grade 7) |
|  | [4.2b](https://www.doe.virginia.gov/home/showpublisheddocument/24716/), [4.3d](https://www.doe.virginia.gov/home/showpublisheddocument/24736/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/) | [**6.1**](https://www.doe.virginia.gov/home/showpublisheddocument/24990/) **Represent relationship between quantities using ratio, and use appropriate notations such as , *a* to *b*, and *a*:*b.*** |  | Equivalencies Among Fractions, Decimals, and Percents | Proportional and Additive Relationships  (Grade 7) |
| **Solving Problems with Proportional Reasoning** | [4.2b](https://www.doe.virginia.gov/home/showpublisheddocument/24716/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/) | [**6.12a**](https://www.doe.virginia.gov/home/showpublisheddocument/25084/) **Represent a proportional relationship between two quantities, including those that arise from practical situations** |  | Equivalencies Among Fractions, Decimals, and Percents | Proportional and Additive Relationships  (Grade 7) |
|  | [4.2b](https://www.doe.virginia.gov/home/showpublisheddocument/24716/), [4.15](https://www.doe.virginia.gov/home/showpublisheddocument/24840/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/) | [**6.12b**](https://www.doe.virginia.gov/home/showpublisheddocument/25088/) **Determine the unit rate of a proportional relationship and use it to find a missing value in a ratio table** |  | Equivalencies Among Fractions, Decimals, and Percents | Proportional and Additive Relationships  (Grade 7) |
|  | [4.15](https://www.doe.virginia.gov/home/showpublisheddocument/24840/) | [5.18](https://www.doe.virginia.gov/home/showpublisheddocument/24970/) | [**6.12c**](https://www.doe.virginia.gov/home/showpublisheddocument/25092/) **Determine whether a proportional relationship exists between two quantities** |  | Equivalencies Among Fractions, Decimals, and Percents | Proportional and Additive Relationships  (Grade 7) |
|  |  |  | [**6.12d**](https://www.doe.virginia.gov/home/showpublisheddocument/25096/) **Make connections between and among representations of a proportional relationship between two quantities using verbal descriptions, ratio tables, and graphs** |  | Coordinate Plane | Proportional and Additive Relationships  (Grade 7) |
|  | [4.4b](https://www.doe.virginia.gov/home/showpublisheddocument/24744/), [4.4c](https://www.doe.virginia.gov/home/showpublisheddocument/24748/), [4.4d](https://www.doe.virginia.gov/home/showpublisheddocument/24752/), [4.16](https://www.doe.virginia.gov/home/showpublisheddocument/24844/) | [5.6b](https://www.doe.virginia.gov/home/showpublisheddocument/24886/), [5.19a](https://www.doe.virginia.gov/home/showpublisheddocument/24974/), [5.19b](https://www.doe.virginia.gov/home/showpublisheddocument/24978/), [5.19c](https://www.doe.virginia.gov/home/showpublisheddocument/24982/), [5.19d](https://www.doe.virginia.gov/home/showpublisheddocument/24986/) | [**6.13**](https://www.doe.virginia.gov/home/showpublisheddocument/25100/) **Solve one-step linear equations in one variable, including practical problems that require the solution of a one-step linear equation in one variable** |  | Integer Operations | Solving Two-Step Linear Equations  (Grade 7) |
| **Representing**  **and Solving Equations and Inequalities** |  | [5.19a](https://www.doe.virginia.gov/home/showpublisheddocument/24974/), [5.19c](https://www.doe.virginia.gov/home/showpublisheddocument/24982/) | [**6.14a**](https://www.doe.virginia.gov/home/showpublisheddocument/25104/) **Represent a practical situation with a linear inequality in one variable** |  | Integer Operations | Solving Two-Step Linear Equations  (Grade 7) |
|  |  |  | [**6.14b**](https://www.doe.virginia.gov/home/showpublisheddocument/25108/) **Solve one-step linear inequalities in one variable, involving addition or subtraction, and graph the solution on a number line** |  | Integer Operations | Solving Two-Step Linear Inequalities  (Grade 7) |
|  | [4.2c](https://www.doe.virginia.gov/home/showpublisheddocument/24720/), [4.3d](https://www.doe.virginia.gov/home/showpublisheddocument/24736/) | [5.2a](https://www.doe.virginia.gov/home/showpublisheddocument/24854/), [5.5a](https://www.doe.virginia.gov/home/showpublisheddocument/24874/), [5.10](https://www.doe.virginia.gov/home/showpublisheddocument/24910/) | [6.7a](https://www.doe.virginia.gov/home/showpublisheddocument/25040/) Derive π (pi) |  | Represent Relationships Between Quantities | Volume and Surface Area  (Grade 7) |
| **Solving Problems with Two Dimensional Geometry** | [4.7](https://www.doe.virginia.gov/home/showpublisheddocument/24796/) | [5.8a](https://www.doe.virginia.gov/home/showpublisheddocument/24894/), [5.8b](https://www.doe.virginia.gov/home/showpublisheddocument/24898/), [5.10](https://www.doe.virginia.gov/home/showpublisheddocument/24910/) | [6.7b](https://www.doe.virginia.gov/home/showpublisheddocument/25044/) Solve problems, including practical problems, involving circumference and area of a circle |  | Solve Problems Involving Fractions and Decimals | Volume and Surface Area  (Grade 7) |
|  | [4.7](https://www.doe.virginia.gov/home/showpublisheddocument/24796/), [4.12](https://www.doe.virginia.gov/home/showpublisheddocument/24772/) | [5.8a](https://www.doe.virginia.gov/home/showpublisheddocument/24894/), [5.8b](https://www.doe.virginia.gov/home/showpublisheddocument/24898/) | [6.7c](https://www.doe.virginia.gov/home/showpublisheddocument/25048/) Solve problems, including practical problems, involving area and perimeter of triangles and rectangles |  | Solve Problems Involving Fractions and Decimals | Volume and Surface Area  (Grade 7) |
|  | [4.10a](https://www.doe.virginia.gov/home/showpublisheddocument/24760/), [4.10b](https://www.doe.virginia.gov/home/showpublisheddocument/24764/), [4.12](https://www.doe.virginia.gov/home/showpublisheddocument/24772/) | [5.12](https://www.doe.virginia.gov/home/showpublisheddocument/24918/), [5.13a](https://www.doe.virginia.gov/home/showpublisheddocument/24922/), [5.14a](https://www.doe.virginia.gov/home/showpublisheddocument/24930/) | [6.9](https://www.doe.virginia.gov/home/showpublisheddocument/25080/) Determine congruence of segments, angles, and polygons |  |  | Angles and Sides of Quadrilaterals and Triangles (Grade 7) |
|  | [4.3d](https://www.doe.virginia.gov/home/showpublisheddocument/24736/), [4.14a](https://www.doe.virginia.gov/home/showpublisheddocument/24828/) | [5.16a](https://www.doe.virginia.gov/home/showpublisheddocument/24942/) | [6.10a](https://www.doe.virginia.gov/home/showpublisheddocument/25050/) Represent data in a circle graph |  | Equivalencies Among Fractions, Decimals, and Percents | Histograms and Comparison to other Graphs  (Grade 7) |
|  | [4.14b](https://www.doe.virginia.gov/home/showpublisheddocument/24832/) | [5.16b](https://www.doe.virginia.gov/home/showpublisheddocument/24946/) | [**6.10b**](https://www.doe.virginia.gov/home/showpublisheddocument/25056/) **Make observations and inferences about data represented in a circle graph** |  |  | Histograms and Comparison to other Graphs  (Grade 7) |
| **Representing**  **and Interpreting Data** | [4.14c](https://www.doe.virginia.gov/home/showpublisheddocument/24836/) | [5.16c](https://www.doe.virginia.gov/home/showpublisheddocument/24950/) | [6.10c](https://www.doe.virginia.gov/home/showpublisheddocument/25058/) Compare circle graphs with the same data represented in bar graphs, pictographs, and line plots |  |  | Histograms and Comparison to other Graphs (Grade 7) |
|  |  | [5.17a](https://www.doe.virginia.gov/home/showpublisheddocument/24954/), [5.17b](https://www.doe.virginia.gov/home/showpublisheddocument/24958/) | [**6.11a**](https://www.doe.virginia.gov/home/showpublisheddocument/25062/) **Represent the mean of a data set graphically as the balance point** |  |  | Box Plots  (Grade 8) |
|  |  | [5.17a](https://www.doe.virginia.gov/home/showpublisheddocument/24954/), [5.17b](https://www.doe.virginia.gov/home/showpublisheddocument/24958/), [5.17c](https://www.doe.virginia.gov/home/showpublisheddocument/24962/), [5.17d](https://www.doe.virginia.gov/home/showpublisheddocument/24966/) | [**6.11b**](https://www.doe.virginia.gov/home/showpublisheddocument/25066/) **Determine the effect on measures of center when a single value of a data set is added, removed, or changed** |  | Solve Problems Involving Fractions and Decimals | Box Plots  (Grade 8) |