

Washington Access to Instruction and Measurement

Mathematics Access Point
Frameworks

2025



Washington Office of Superintendent of
PUBLIC INSTRUCTION

REVISION LOG

Changes to this document made after December 31, 2025, will be noted in the table below.

Section	Page	Description of Revision	Revision Date

Table of Contents

Revision Log.....	1
Table of Tables.....	4
Overview of Mathematics Access Points.....	6
Mathematics Access Points.....	6
Grade 3 Learning Standards Developed into Access Point Frameworks.....	7
Mathematics Access Point Frameworks–Grade 3.....	8
3.G.1 Learning Standard.....	8
3.MD.4 Learning Standard.....	9
3.NBT.1 Learning Standard.....	10
3.NF.1 Learning Standard.....	11
3.OA.8 Learning Standard.....	12
Learning Standards Developed into Access Point Frameworks–Grade 4.....	13
Mathematics Access Point Frameworks–Grade 4.....	14
4.G.1 Learning Standard.....	14
4.MD.3 Learning Standard.....	15
4.NBT.2 Learning Standard.....	16
4.NF.1 Learning Standard.....	17
4.OA.1 Learning Standard.....	18
Grade 5 Learning Standards Developed into Access Point Frameworks.....	19
Mathematics Access Point Frameworks–Grade 5.....	20
5.G.3 Learning Standard.....	20
5.MD.2 Learning Standard.....	21
5.NBT.6 Learning Standard.....	22
5.NF.2 Learning Standard.....	23
5.OS.3 Learning Standard.....	24
Learning Standards Developed into Access Point Frameworks–Grade 6.....	25
Mathematics Access Point Frameworks – Grade 6.....	26
6.G.1 Learning Standard.....	26
6.EE.7 Learning Standard.....	27
6.NS.5 Learning Standard.....	28

6.RP.1 Learning Standard	29
6.SP.5 Learning Standard.....	30
Learning Standards Developed into Access Point Frameworks–Grade 7	32
Mathematics Access Point Frameworks–Grade 7	33
7.G.6 Learning Standard.....	33
7.EE.4 Learning Standard	34
7.NS.2 Learning Standard.....	35
7.RP.2 Learning Standard	36
7.SP.5 Learning Standard.....	37
Learning Standards Developed into Access Point Frameworks–Grade 8	38
Mathematic Access Point Frameworks–Grade 8	39
8.G.4 Learning Standard.....	39
8.EE.5 Learning Standard	40
8.F.5 Learning Standard.....	41
8.NS.2 Learning Standard.....	42
8.SP.4 Learning Standard.....	43
Learning Standards Developed into Access Point Frameworks–High School	44
Mathematic Access Point Frameworks–High School.....	45
HS.A-CED.1 Learning Standard	45
HS.A-REI.10 Learning Standard	46
HS.G-CO.7 Learning Standard	47
HS.N-RN.1 Learning Standard	48
HS.S-ID.4 Learning Standard.....	49
Glossary of Terms.....	50
General	50
Mathematics.....	50
Mathematics Continued.....	51
Legal Notice	53

TABLE OF TABLES

Table 1 Grade 3 Learning Standards	7
Table 2 3.G.1 Access Points.....	8
Table 3 3.MD.4 Access Points.....	9
Table 4 3.NBT.1 Access Points.....	10
Table 5 3.NF.1 Access Points	11
Table 6 3.OA.8 Access Points.....	12
Table 7 Grade 4 Learning Standards	13
Table 8 4.G.1 Access Points.....	14
Table 9 4.MD.3 Access Points.....	15
Table 10 4.NBT.2 Access Points	16
Table 11 4.NF.1 Access Points.....	17
Table 12 4.OA.1 Access Points	18
Table 13 Grade 5 Learning Standards.....	19
Table 14 5.G.3 Access Points	20
Table 15 5>MD.2 Access Points.....	21
Table 16 5.NBT.6 Access Points	22
Table 17 5.NF.2 Access Points.....	23
Table 18 5.OA.3 Access Points	24
Table 19 Grade 6 Learning Standards.....	25
Table 20 6.G.1 Access Points	26
Table 21 6.EE.7 Access Points.....	27
Table 22 6.NS.5 Access Points.....	28
Table 23 6.RP.1 Access Points	29
Table 24 6.SP.5 Access Points	30
Table 25 6.SP.5 Washinton K-12 Learning Standard Continued.....	31
Table 26 Grade 7 Learning Standards.....	32
Table 27 7.G6 Access Points	33
Table 28 7.EE.4 Access Points.....	34
Table 29 7.NS.2 Access Points.....	35
Table 30 7.RP.2 Access Points	36
Table 31 7.SP.5 Access Points	37
Table 32 Grade 8 Learning Standards.....	38
Table 33 8.G.4 Access Points	39
Table 34 8.EE.5 Access Points.....	40
Table 35 8.F.5 Access Points	41
Table 36 8.NS.2 Access Points.....	42
Table 37 8.SP.4 Access Points	43
Table 38 High School Learning Standards	44

Table 39 General Glossary A-S	50
Table 40 Mathematics Glossary A-E	50
Table 41 Mathematics Glossary E-R	51
Table 42 Mathematics Glossary Continued S-Y	52

OVERVIEW OF MATHEMATICS ACCESS POINTS

Washington’s alternate assessment aligned to the Washington K–12 Learning Standards. The WA-Access to Instruction & Measurement, is built off of Access Point Frameworks. The Access Point Frameworks expand upon the learning standards to provide students with significant cognitive challenges greater access to the standards via a continuum of complexity, thus providing students with multiple entry points to accessing grade level content. Each Access Point is aligned to the learning standard to ensure maximum access to the general education standards. The Essential Element associated with the learning standard is presented alongside the Access Point Frameworks as a part of an instructional continuum.

For mathematics, English language arts, and science¹ at grades three through eight and eleven, the Access Point Frameworks have three consistent levels of complexity: more complex (M), intermediate complexity (I), and less complex (L). The less complex Access Points are represented on the right side of the frameworks with the Access Points increasing the complexity of knowledge and skills the student is being asked to demonstrate moving towards the right, closer towards the CCSS.

The Access Point Frameworks are the underpinning for the WA-Access to Instruction & Measurement and serve as the foundation for the performance task component of the assessment. The Access Point Frameworks were developed with content experts in collaboration with educators from across the state of Washington and OSPI.

The layout of this document shows the association between the CCSS, the EE, and the Access Point Frameworks and provides educators the opportunity to see the spectrum of knowledge and skills articulated in each content standard. This document also allows educators to look across years to see how the standards build across years

MATHEMATICS ACCESS POINTS

At each grade, one mathematics Access Point Framework has been developed for each of the five domains of the Common Core State Standards of mathematical practice. At the beginning of each grade is a map of the Common Core State Standards that have been developed into Access Point Frameworks. This page is then followed by the frameworks for each grade level. Terminology specific to mathematics is defined in the glossary located at the back of the document.

GRADE 3 LEARNING STANDARDS DEVELOPED INTO ACCESS POINT FRAMEWORKS

Table 1 Grade 3 Learning Standards

Domain	Washington K-12 Learning Standard
Geometry (G)	3. G.1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
Measurement & Data (MD)	3. MD.4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.
Number and Operations in Base Ten (NBT)	3. NBT.1. Use place value understanding to round whole numbers to the nearest 10 or 100.
Number and Operations-Fractions (NF)	3. NF.1. Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.
Operations and Algebraic Thinking (OA)	3. OA.8. Solve two-step word problems using the four operations. 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.

MATHEMATICS ACCESS POINT FRAMEWORKS—GRADE 3

3.G.1 Learning Standard

Domain: Geometry

Cluster: Reason with shapes and their attributes

Table 2 3.G.1 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
3.G.1 Understand that shapes in different categories (e.g. rhombuses, rectangles, and others) may share attributes (e.g. having four sides), and that the shared attributes can define a larger category (e.g. quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	EE.3.G.1 Describe attributes of two-dimensional shapes.	Student will use number of angles or number of sides to describe or identify a figure.	Student will recognize sides or angles in two-dimensional shapes.	Student will identify circles, squares, and triangles.

3.MD.4 Learning Standard

Domain: Measurement and Data

Cluster: Represent and interpret data.

Table 3 3.MD.4 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
3.MD.4 Generate measurements data by measuring the lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale, is marked off in appropriate units – whole numbers, halves, or quarters.	EE.3.MD.4 Measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks.	<i>Student will measure the length of an object to the nearest whole unit.</i>	Student will identify tools that can be used to measure length.	<i>Student will identify the longest (shortest) object when given two objects.</i>

3.NBT.1 Learning Standard

Domain: Number and Operations in Base Ten.

Cluster: Use place value understanding and properties of operations to perform multi-digit arithmetic.

Table 4 3.NBT.1 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	EE.3.NBT.1 Use decade numbers (10, 20, and 30) as benchmarks to demonstrate understanding of place value for number 0-30.	<i>Student will round two-digit numbers (10-30) to the nearest 10.</i>	Student will use base-ten to identify numbers between 10 and 30.	<i>Student will identify numbers between 0 and 10.</i>

3. NF.1 Learning Standard

Domain: Numbers and Operations–Fractions

Cluster: Develop understanding of fractions as numbers.

Table 5 3.NF.1 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
3.NF.1 Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of $1/b$.	EE.3.NF.1 Differentiate a fractional part from a whole.	<i>Student will identify a unit fraction of a modeled fraction or use a model to represent a unit fraction.</i>	Student will recognize a whole and parts in relation to the whole of two-dimensional figures.	<i>Student will recognize a whole and parts of real-world objects.</i>

3.OA.8 Learning Standard

Domain: Operations and Algebraic Thinking

Cluster: Solve problems involving the four operations and identify and explain patterns in arithmetic.

Table 6 3.OA.8 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>3.OA.8 Solve two-step word problems using four operations. Represent these problems using equations with a letter standing in for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p>	<p>EE.3.OA.8 Solve one-step- real-world problems using addition or subtraction within 20.</p>	<p><i>Student will solve one-step real-world problems using addition or subtraction with sums/differences within 20.</i></p>	<p><i>Student will solve one-step real-world problems using objects or models to compose or decompose numbers up to 10.</i></p>	<p><i>Student will use counting (up to 5) to solve real-world problems.</i></p>

LEARNING STANDARDS DEVELOPED INTO ACCESS POINT FRAMEWORKS—GRADE 4

Table 7 Grade 4 Learning Standards

Domain	Washington K-12 Learning Standard
Geometry (G)	4. G.1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
Measurement & Data (MD)	4. MD.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.
Number and Operations in Base Ten (NBT)	4. NBT.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.
Number and Operations-Fractions (NF)	4. NF.1. Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ 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.
Operations and Algebraic Thinking (OA)	4. OA.1. Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ 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.

4.G.1 Learning Standard

Domain: Geometry

Cluster: Draw and identify lines and angles and classify shapes by properties of their lines and angles.

Table 8 4.G.1 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	EE.4.G.1 Recognize parallel lines and intersecting lines.	Student will create parallel lines and intersecting lines.	Student will identify parallel lines and intersecting lines.	Student will differentiate between straight lines and curved lines.

4.MD.3 Learning Standard

Domain: Measurement and Data

Cluster: Solve problems involving measurement and conversion of measurements from a larger unit into a smaller unit.

Table 9 4.MD.3 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
4.MD.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.	EE.4.MD.3 Determine the area of a square or rectangle by counting units of measure (unit squares).	Student will calculate the perimeter of a rectangle with unit markings (each dimension ≤ 5).	Student will differentiate between area and perimeter.	Student will trace the perimeter of a shape.

4.NBT.2 Learning Standard

Domain: Number and Operations in Base Ten

Cluster: Generalize place value understanding for multi-digit whole numbers.

Table 10 4.NBT.2 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
4.NBT.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 result comparisons.	EE.4.NBT.2 Compare whole numbers to 10 using symbols ($<$, $>$, $=$).	Student will compare whole numbers to 10 using symbols ($<$, $>$, $=$).	Student will identify models that represent less than, greater than, and equal.	Student will identify the model that shows more.

4.NF.1 Learning Standard

Domain: Number and Operations-Fractions

Cluster: Extend understanding of fraction equivalence and ordering

Table 11 4.NF.1 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
4. NF.1. Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ 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.	EE.4.NF.1–2. Identify models of one half ($1/2$) and one fourth ($1/4$).	Student will identify or create models that are equivalent to one-half ($2/4$, $3/6$, $4/8$, $5/10$).	Student will identify models of one-half and one-fourth.	Student will identify real-world objects that represent one-half or one whole.

4.OA.1 Learning Standard

Domain: Operations and Algebraic Thinking

Cluster: Use the four operations with whole numbers to solve problems

Table 12 4.OA.1 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
4. OA.1. Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \cdot 7$ 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.	EE.4.OA.1-2. Demonstrate the connection between repeated addition and multiplication.	Student will skip count by 2s, 5s, or 10s.	Student will identify models that represent the sum of two of the same number.	Student will identify equal groups.

GRADE 5 LEARNING STANDARDS DEVELOPED INTO ACCESS POINT FRAMEWORKS

Table 13 Grade 5 Learning Standards

Domain	Washington K-12 Learning Standard
Geometry (G)	5. G.3. Understand that attributes belonging to a category of two dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.
Measurement & Data (MD)	5. MD.2. Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.
Number and Operations in Base Ten (NBT)	5. NBT.6. Find whole-number quotients of whole numbers with up to four-digit dividends and two 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.
Number and Operations- Fractions (NF)	5. NF.2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result $\frac{2}{5} + \frac{1}{2} = \frac{3}{7}$, by observing that $\frac{3}{7} < \frac{1}{2}$. EE.5.NF.2. Identify models of thirds ($\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$) and tenths ($\frac{1}{10}$, $\frac{2}{10}$, $\frac{3}{10}$, $\frac{4}{10}$, $\frac{5}{10}$, $\frac{6}{10}$, $\frac{7}{10}$, $\frac{8}{10}$, $\frac{9}{10}$, $\frac{10}{10}$).
Operations and Algebraic Thinking (OA)	5. OA.3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.

MATHEMATICS ACCESS POINT FRAMEWORKS—GRADE 5

5.G.3 Learning Standard

Domain: Geometry

Cluster: Classify two-dimensional figures into categories based on their properties.

Table 14 5.G.3 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories for that category. For example, all rectangles have four right angles and squares are rectangles so all squares have four right angles.	EE.5.G.1-4 Sort two-dimensional figures and identify the attributes (angles, number of sides, corners, color) they have in common.	Student will complete a bar graph, line plot, or picture graph when given collected data and graph template.	Student will read a picture graph, line plot, and bar graph to answer a simple question.	Student will identify the category in a bar graph or a picture graph with the most or least.

5.MD.2 Learning Standard

Domain: Measurement and Data

Cluster: Represent and Interpret Data

Table 15 5>MD.2 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid in each beaker would contain if the total amount in all the beakers were redistributed equally.</p>	<p>EE.5.MD.2 Represent and interpret data on a picture, line plot, or a bar graph.</p>	<p>Student will complete a bar graph, line plot, or picture graph when given collected data and graph template.</p>	<p>Student will read a picture graph, line plot, and bar graph to answer a simple question.</p>	<p>Student will identify the category in a bar graph or picture graph with the most or least.</p>

5.NBT.6 Learning Standard

Domain: Number and Operations in Base Ten

Cluster: Perform operations with multi-digit whole numbers with decimals to hundredths.

Table 16 5.NBT.6 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.</p>	<p>EE.5.NBT.6 Illustrate the concept of division using fair and equal shares.</p>	<p>Student will identify a model to solve problems involving divisors and quotients (up to 10).</p>	<p>Student will use models and counting to determine the answer to a real-world problem.</p>	<p>Student will divide objects (up to 10) into equal groups.</p>

5.NF.2 Learning Standard

Domain: Number and Operations–fractions

Cluster: Use equivalent fractions as a strategy to add and subtract fractions

Table 17 5.NF.2 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators (e.g. by using visual fraction models or equations to represent the problem). Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.</p>	<p>EE.5.NF.2 Identify models of thirds ($1/3$, $2/3$, $3/3$) and tenths ($1/10$, $2/10$, $3/10$, $4/10$, $5/10$, $6/10$, $7/10$, $8/10$, $9/10$, $10/10$).</p>	<p>Student will use models to solve addition problems involving fractions (halves, thirds, fourths, and tenths) with like denominators with a sum less than or equal to 1.</p>	<p>Student will identify models of thirds ($1/3$, $2/3$, $3/3$), fourths ($1/4$, $2/4$, $3/4$, $4/4$), and tenths ($1/10$, $2/10$, $3/10$, $4/10$, $5/10$, $6/10$, $7/10$, $8/10$, $9/10$, $10/10$).</p>	<p>Student will identify model that represents one-half, one-fourth, and one whole.</p>

5.OA.3 Learning Standard

Domain: Operations and Algebraic Thinking

Cluster: Analyze patterns and relationships

Table 18 5.OA.3 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plain. For example give the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequence, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</p>	<p>EE.5.OA.3 Identify and extend numerical patterns.</p>	<p>Students will identify extended numerical addition or subtraction patterns.</p>	<p>Student will extend a modeled numerical pattern that involves an addition rule.</p>	<p>Student will extend AB shape patterns.</p>

LEARNING STANDARDS DEVELOPED INTO ACCESS POINT FRAMEWORKS—GRADE 6

Table 19 Grade 6 Learning Standards

Domain	Washington K-12 Learning Standard
Geometry (G)	6. G.1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
Expressions and Equations (EE)	6. EE.7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.
The Number System (NS)	6. NS.5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
Ratios and Proportional Relationships (RP)	6. RP.1. Understand the concept of a ratio, and use ratio language to describe a ratio relationship between two quantities. For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.”
Statistics and Probability (SP)	6. SP.5. Summarize numerical data sets in relation to their context, such as by: a. Reporting the number of observations. b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. d. Relating the choice of measures of center and variability to the shape of the data.

MATHEMATICS ACCESS POINT FRAMEWORKS – GRADE 6

6.G.1 Learning Standard

Domain: Geometry

Cluster: Solve real-world and mathematical problems involving areas, surface area, and volume.

Table 20 6.G.1 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
6.G.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes. Apply these techniques in the context of solving real-world mathematical problems.	EE.6.G.1 Solve real-world and mathematical problems about area using squares.	Student will count unit squares to determine the area of a composite figure made up of two rectangles.	Student will count unit squares to determine the area of a rectangle.	Student will count unit squares to determine the area of a rectangle with one dimension equal to 1.

6.EE.7 Learning Standard

Domain: Expressions and Equations

Cluster: Reason about and solve one-variable equations and inequities.

Table 21 6.EE.7 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
6.EE.7 Solve real-world and mathematical problems by writing and solving equations in the form of $x + p = q$ and $px = q$ for cases in which p , q , and x are all nonnegative rational numbers.	EE.6.EE.5-7 Match an equation to a real-world problem in which variables are used to represent numbers.	Student will identify an algebraic equation that represents a one-step problem (where the variable does not represent the sum or difference)	Student will identify an algebraic equation that represents a real-world problem involving addition where the variable represents the sum.	Student will identify a numerical equation involving addition that represents a modeled real-world problem.

6.NS.5 Learning Standard

Domain: The Number System

Cluster: Apply and extend previous understandings of numbers to the system of rational numbers.

Table 22 6.NS.5 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
6.NS.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g. temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge). Use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	EE.6.NS.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g. temperature above/below freezing).	Student will determine the distance from zero to any given point on a number line.	Student will identify a number line (or real-world scale such as a thermometer) that shows an amount less than zero.	Student will identify a model of zero.

6.RP.1 Learning Standard

Domain: Ratios and Proportional Relationships

Cluster: Understand ratio concepts and use ratio reasonings to solve problems.

Table 23 6.RP.1 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ration of wings to beaks in the bird house at the zoon was 2:1, because for every 2 wings there was 1 beak" "For every vote candidate A received. Candidate C received nearly three votes."</p>	<p>EE.6.RP.1 Demonstrate a simple ratio relationship.</p>	<p>Student will generate a ratio based on a model or a real-world situation.</p>	<p>Student will identify a model of a given simple ratio.</p>	<p>Student will identify a model that represents a 1:1 ratio.</p>

6.SP.5 Learning Standard

Domain: Statistics and Probability

Cluster: Summarize and describe distributions.

Table 24 6.SP.5 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>6.SP.5 Summarize numerical data sets in relations to their context, such as by:</p> <p>a. Reporting the number of observations</p> <p>b. Describe the nature of the attribute under investigation, including how it was measured and its units of measurement.</p> <p>c. Given quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data was gathered.</p>	<p>EE.6.SP.5 Summarize data distributions shown in graphs or tables.</p>	<p>Student will identify the median of a set of ordered data (with an odd number of data points).</p>	<p>Student will identify the greatest value and the least value of a set of ordered data.</p>	<p>Student will identify the object that appears most frequently (mode) in a set of ordered data.</p>

Table 25 6.SP.5 Washinton K-12 Learning Standard Continued

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<i>d. Relating the choice of measures of center and variability to the shape of the data.</i>				

LEARNING STANDARDS DEVELOPED INTO ACCESS POINT FRAMEWORKS—GRADE 7

Table 26 Grade 7 Learning Standards

Domain	Washington K-12 Learning Standard
Geometry (G)	7. G.6. Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.
Expressions and Equations (EE)	7. EE.4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
The Number System (NS)	7. NS.2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
Ratios and Proportional Relationships (RP)	7. RP.2. Recognize and represent proportional relationships between quantities.
Statistics and Probability (SP)	7. SP.5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

7.G.6 Learning Standard

Domain: Geometry

Cluster: Solve real-life problems and mathematical problems involving angles, measure, surface area, and volume.

Table 27 7.G6 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
7.G.6 Solve real-world and mathematical problems involving area, volume and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	EE.7.G.6 Determine the area of a rectangle using the formula for length x width, and confirm the results using tiling or partitioning into unit squares.	Student will use counting to find the volume of a rectangular prism made up of unit cubes with one dimension equal to 1.	Student will determine the area of a rectangle of a composite figure made up of rectangles drawn on a grid.	Student will use unit squares to determine the area of a rectangle.

7.EE.4 Learning Standard

Domain: Expressions and Equations

Cluster: Solve real-world problems and mathematical problems using numerical and algebraic expressions and equations.

Table 28 7.EE.4 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>7.EE.4 Use variables to represent quantities in a real-world or mathematical problem and construct simple equations and inequities to solve problems by reasoning about the quantities.</p>	<p>EE.7.EE.4 Use the concept of equality with models to solve one-step addition and subtraction equations.</p>	<p>Student will solve one-step algebraic equations involving addition or subtraction (where the variable does not represent the sum or difference).</p>	<p>Student will solve one-step algebraic equations involving addition or subtraction using models (where the variable does not represent the sum or difference).</p>	<p>Student will solve numeric equations involving addition and subtraction using models.</p>

7.NS.2 Learning Standard

Domain: The Number System

Cluster: Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Table 29 7.NS.2 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	<p>EE.7.NS.2.</p> <p>a Solve multiplication problems with products to 100.</p> <p>EE.7.NS.2.</p> <p>b Solve division problems with divisors up to 5 and also with a divisor or 10 without remainders.</p>	Student will solve multiplication or division problems (with a product to 100 or a divisor up to 10 without remainders).	Student will solve multiplicative comparison word problems involving 1, 5, and 10.	Student will identify a model that represents a real-world multiplication problem.

7.RP.2 Learning Standard

Domain: Ratios and Proportional Relationships

Cluster: Analyze proportional relationships and use them to solve real-world and mathematical problems.

Table 30 7.RP.2 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
7.RP.2 Recognize and represent proportional relationships between quantities.	EE.7.RP.1-3 Use a ratio model or describe a relationship.	Student will identify an equivalent ratio or a model in a real-world situation.	Student will identify a simple ratio of a given, modeled ratio.	Student will identify a 1:2 ratio of a given, modeled ratio.

7.SP.5 Learning Standard

Domain: Statistics and Probability

Cluster: Investigate chance processes and develop, use, and evaluate probability models.

Table 31 7.SP.5 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>7.SP.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event. A probability of $\frac{1}{2}$ indicates an event that is neither likely nor unlikely. A probability of 1 indicates a likely event.</p>	<p>EE.7.SP.5-7 Describe the probability of events occurring as possible or impossible.</p>	<p>Student will determine whether an event is impossible, unlikely, likely, and certain.</p>	<p>Student will identify situations that represent equally likely events.</p>	<p>Student will identify events that are impossible or certain.</p>

LEARNING STANDARDS DEVELOPED INTO ACCESS POINT FRAMEWORKS—GRADE 8

Table 32 Grade 8 Learning Standards

Domain	Washington K-12 Learning Standard
Geometry (G)	8. G.4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
Expressions and Equations (EE)	8. EE.5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.
Functions (F)	8. F.5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.
The Number System (NS)	8. NS.2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.
Statistics and Probability (SP)	8. SP.4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?

8.G.4 Learning Standard

Domain: Geometry

Cluster: Understand congruence and similarity using physical models, transparencies, or geometry software.

Table 33 8.G.4 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>8.G.4 Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures. Describe a sequence that exhibits the similarity between them.</p>	<p>EE.8.G.4 Identify similar shapes with and without rotation.</p>	<p>Student will demonstrate understanding of similar figures drawn on a grid (with rotation).</p>	<p>Student will identify similar figures on a grid without rotation.</p>	<p>Student will identify a similar and congruent circles and squares.</p>

8.EE.5 Learning Standard

Domain: Expressions and Equations

Cluster: Understand the connections between proportional relationship, lines, and linear equations

Table 34 8.EE.5 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of the two moving objects has greater speed.	EE.8.EE.5-6 Graph a simple ratio by connecting the origin to a point representing the ratio in the form of y/x . For example, when given a ratio in standard form (2:1), convert to $2/1$, and plot the point (1, 2)	Student will identify a graph given a ratio relationship displayed in the table.	Student will locate or identify a point in the first quadrant of a coordinate grid.	Student will locate or identify a point on a number line.

8.F.5 Learning Standard

Domain: Functions

Cluster: Use functions to model relationships between quantities.

Table 35 8.F.5 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>8.F.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g. where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.</p>	<p>EE.8.F.5 Describe how a graph represents a relationship between two quantities.</p>	<p>Student will describe a relationship between two quantities shown in a scatter plot or line graph.</p>	<p>Student will identify a correct statement about a scatter plot or a line graph that shows a relationship between quantities.</p>	<p>Student will identify the topic of information represented in a scatter plot or line graph.</p>

8.NS.2 Learning Standard

Domain: The Number System

Cluster: Know that there are numbers that are not rational and approximate them by rational numbers.

Table 36 8.NS.2 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>8.NS.2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them, approximately on a number line diagram, and estimate the value of expressions (e.g. π^2). For example by truncating the decimal expansion of $\sqrt{2}$ show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.</p>	<p>EE.8.NS.2 b Compare quantities represented as decimals in real-world examples to hundredths.</p>	<p>Student will use models to compare decimals to the hundredths place.</p>	<p>Student will use models to compare decimals to the tenths place.</p>	<p>Student will identify the greater decimal using models.</p>

8.SP.4 Learning Standard

Domain: Statistics and Probability

Cluster: Investigate patterns of association in bivariate data

Table 37 8.SP.4 Access Points

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>8.SP.4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?</p>	<p>EE.8.SP.4 Construct a graph or table from a given categorical data and compare data categorized in the graph or table.</p>	<p>Student will represent given unorganized data by completing a bar graph or picture graph using a template.</p>	<p>Student will identify a bar graph or picture graph that represents given data.</p>	<p>Student will sort given unorganized data into two groups.</p>

LEARNING STANDARDS DEVELOPED INTO ACCESS POINT FRAMEWORKS—HIGH SCHOOL

Table 38 High School Learning Standards

Domain	Washington K-12 Learning Standard
Algebra-Creating Equations (A-CED)	HS.A-CED.1. Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.
Algebra-Reasoning with Equations and Inequalities (A-REI)	HS.A.REI.10. Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).
Geometry-Congruence (G-CO)	G-CO.7. Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.
Number and Quantity-The Real Number System (N-RN)	HS.N-RN.1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})^3 = 5(1/3)^3$ to hold, so $(5^{1/3})^3$ must equal 5.
Statistics and Probability-Interpreting Categorical and Quantitative Data (S-ID)	HS.S-ID.4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.

MATHEMATIC ACCESS POINT FRAMEWORKS—HIGH SCHOOL

HS.A-CED.1 Learning Standard

Domain: Algebra-Creating Equations

Cluster: Create equations that describe numbers or relationships.

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
HS.A-CED.1 Create equations and inequalities involving one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.	EE.A-CED.1 Create an equation involving one operation with one variable and use it to solve real-world problems.	Student will write and solve a one-step algebraic equation representing a real-world problem.	Student will solve a one-step algebraic equation involving addition and subtraction representing a real world solution.	Student will identify an algebraic equation involving addition and subtraction (up to 20) that represents a modeled real-world situation.

HS.A-REI.10 Learning Standard

Domain: Algebra-Reasoning with Equations and Inequalities

Cluster: Represent and solve equations and inequalities graphically

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>HS.A-REI.10 Understand that the graph of an equation in two variables is set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).</p>	<p>EE.A-REI.10-12 Interpret the meaning of a plot point on a graph of a line. For example, a graph of pizza purchases, trace the graph to a point and tell the number of pizzas purchased and the total cost of the pizzas.</p>	<p>Student will interpret the meaning of a point on a line graphed in the first quadrant.</p>	<p>Student will identify the ordered pair of a point plotted in the first quadrant using whole numbers (up to 10)</p>	<p>Student will identify the horizontal quantity and the vertical quantity represented in a graph.</p>

HS.G-CO.7 Learning Standard

Domain: Geometry-Congruence

Cluster: Understand congruence in terms of rigid motions.

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
HS.G-CO.7 Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.	EE.G-CO.6-8 Identify corresponding congruent and similar parts of shapes.	Student will identify corresponding congruent angles in two similar triangles.	Student will identify corresponding sides in similar rectangles.	Student will identify regular figures that are similar.

HS.N-RN.1 Learning Standard

Domain: Number and Quantity–The Real Number System

Cluster: Extend the properties of exponents to rational exponents.

WASHINGTON K-12 LEARNING STANDARD	ESSENTIAL ELEMENT	ACCESS POINT MORE COMPLEX	ACCESS POINT INTERMEDIATE	ACCESS POINTS LESS COMPLEX
<p>HS.N-RN.1 Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(\frac{5^1}{3})^3 = 5(\frac{1}{3})^3$ to hold, so $(\frac{5^1}{3})^3$ must equal 5.</p>	<p>EE.N-RN.1 Determine the value of a quantity that is squared or cubed.</p>	<p>Student will determine the value of a quantity that is squared (with a base >5) or cubed (with base ≤ 3).</p>	<p>Student will determine the value of a quantity that is squared (with a base ≤ 5) using a model.</p>	<p>Student will identify the model with the greater or lesser value when given two models of squared numbers.</p>

HS.S-ID.4 Learning Standard

Domain: Statistics and Probability–Interpreting Categorical and Quantitative Data

Cluster: Summarize, represent, and interpret data on a single count or measurement value

Washington K-12 Learning Standard	Essential Element	Access Point More Complex	Access Point Intermediate	Access Points Less Complex
<p>HS.S-ID.4 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.</p>	<p>EE.S-ID.4 Calculate the mean of a given data set (limit the number of data points to fewer than 5).</p>	<p>Student will determine the median or the mean from data shown in a frequency table or line plot.</p>	<p>Student will identify the size of a population from data shown in a bar graph, line plot, or picture graph.</p>	<p>Student will determine the mode from data shown in a bar graph, line plot, or picture graph.</p>

GLOSSARY OF TERMS

General

Table 39 General Glossary A-S

Word	Definition
Access Point Framework	An Access Point Framework is the continuum of three Access Points aligned to a single standard.
Cluster	A cluster is a small group of related standards within a domain.
Domain	A domain is a large group of related standards. Mathematics standards are organized into Domains.
Essential Element	A specific statement of knowledge and skills linked to the grade-level expectation that builds a bridge between content standards to academic expectations for students with the most significant cognitive disabilities.
Standard (Learning Standard)	A standard defines what a student should know and be able to do (knowledge and skills).

Mathematics

Table 40 Mathematics Glossary A-E

Word	Definition
Area	The space inside a figure measured with square units that can cover a figure without any gaps or overlaps.
Array	A set of objects or numbers arranged, in order, commonly in rows and columns.
Attribute	A characteristic of an object. Attributes may include size, number of sides, or number of angles.
Bar Graph	A graph that uses horizontal or vertical bars to represent numbers in a set of data.
Composite Figure	A figure that is made up of two or more geometric shapes.
Congruent Sides	The sides of a figure (or two figures) that are equal in length.
Coordinate Grid	A two-dimensional system in which the coordinates of a point are its distance from the origin (the location where the two axes intersect)
Corresponding Sides	Sides that are in the same position in different plane figures.
Denominator	The bottom number of a fraction which represents the number of parts the whole is divided into. In the fraction $\frac{1}{4}$ the 4 is the denominator.
Equation	A number sentence which shows that two quantities are equal.

Mathematics Continued

Table 41 Mathematics Glossary E-R

Word	Definition
Algebraic Equation	An equation that includes at least one variable.
Numeric Equation	An equation that includes only numbers and symbols.
Equivalent	Having the same value or naming the same amount.
First Quadrant	The quadrant located in the upper right portion of the coordinate plane. In the first quadrant, both the X and Y coordinates are positive numbers.
Line Plot (Dot Plot)	A method of visually displaying a distribution of data values where each data value is shown as a dot or mark above a number line.
Mean	A measure of center in a set of numerical data, computed by adding the values and then dividing by the number of values in the list.
Median	A measure of center in a numerical set of data. The median list of values is the value appearing at the center of a sorted version of the list—or the mean of the two central values, if the list contains an even number of values. Example: In the Data set 2, 3, 6, 7, 10, 12, 15, 22, 90 the mean is 11.
Mode	In a set of data the value or object that appears the most often.
Numerator	The top portion of a fraction representing the number of parts of the whole.
Ordered Pair	Coordinates that identify an exact location of a point of object on a grid, coordinate plane, or map (written as x, y).
Parallel Lines	Lines that are in the same plane and never intersect.
Pattern	A pattern of geometric shapes or numbers that are arranged according to a rule.
Perimeter	The distance around a shape.
Perpendicular Lines	Lines that intersect at a 90-degree angle.
Picture Graph	A record of data collected that consists of categories of data and uses pictures or symbols to represent the frequency that each category occurred.
Population	The entire group of objects or individuals considered for a survey.
Probability	A number between 0 (impossible) and 1 (certain) used to quantify the likelihood for processes that have uncertain outcomes (e.g. tossing a coin, selecting a person at random, tossing ball at a target, etc.).
Ratio	A comparison of two amounts. Ratios can be written many ways including: 3:4, 3 to 4, or $\frac{3}{4}$.
Regular Figure	A polygon in which all sides are congruent, and all angles are congruent.
Rotation	A transformation in which a figure is turned around a fixed point.

Table 42 Mathematics Glossary Continued S-Y

Word	Definition
Scatter Plot	A graph in the coordinate plane representing a set of bivariate data. For example, the heights and weights of a group could be displayed on a scatter plot.
Similar Figures	Figures that have the same shape, equal angles, and proportionate corresponding sides.
Unit Rate	A rate with a denominator equal to 1.
Variable	A missing number in an equation represented by a letter.
Volume	The amount of cubic units it takes to fill a three-dimensional object. For example: If the dimensions of a rectangular solid are measured in inches, the volume of the rectangle are given in cubic inches.
X-Axis	The horizontal line on the coordinate plane that intersects at the origin of the y-axis.
Y-Axis	The vertical line on the coordinate plane that intersects at the origin of the x-axis.

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Washington Office of Superintendent of
PUBLIC INSTRUCTION

Chris Reykdal | State Superintendent
Office of Superintendent of Public Instruction
Old Capitol Building | P.O. Box 47200
Olympia, WA 98504-7200