

**Fractional Geometry (PreK-2) / Numbers & Operations: Fractions (3-5) / Ratios & Proportions (6-7) / Functions (8)**

Measurement Topic	Scope Level	MSD Power Standards (CCSS)	Student Learning Targets
-------------------	-------------	-------------------------------	--------------------------

*--Early Elementary Benchmarks--*

<b>Geometry: Fractions</b>	GF Level 1	<b>F.A</b> <i>(ME ELG Math A)</i>	Students can demonstrate an understanding of whole and part.
<b>Geometry: Fractions</b>	GF Level 2	<b>F.B</b> <i>(K.G.B.6)</i>	Students can use simple shapes to make larger shapes.
<b>Geometry: Fractions</b>	GF Level 3	<b>F.C</b> <i>(1.G.A.3)</i>	Students can divide shapes into parts and understands a whole is made up of parts.
<b>Geometry: Fractions</b>	GF Level 4	<b>F.D</b> <i>(2.G. 2 &amp; 2.G.A.3)</i>	Students can find the area of a rectangle by dividing it into rows and columns of equal size squares. They can divide shapes into equal parts and can begin to use fractions to describe the equal parts of a shape. (Halves, thirds, fourths, fifths).

*--Late Elementary Benchmarks--*

<b>Fractions, Decimals and Percents</b>	FDP Level 1	<b>F.E</b> <i>(3.NF.1 and 3.NF.2)</i>	Students can show/explain in words/pictures that fractions are equal parts of a whole and are equal to other fractions and where they fall on a number line (halves, thirds, fourths)
---	----------------	--	---

**Fractional Geometry (PreK-2) / Numbers & Operations: Fractions (3-5) / Ratios & Proportions (6-7) / Functions (8)**

Measurement Topic	Scope Level	MSD Power Standards (CCSS)	Student Learning Targets
Fractions, Decimals and Percents	FDP Level 2	<b>F.F</b> (3.NF.A.3 A,B,C,D)	Students can compare fractions to other fractions and fractions to whole numbers to see if they are equivalent .
Fractions, Decimals and Percents	FDP Level 3	<b>F.G</b> (4.NF.1 & 4.NF.2)	Students can explain (show models of) equivalent fraction understanding and compare ( $<$ , $>$ , $=$ ) two fractions with different numerators and different denominators (i.e. how $1/2=2/4=3/6$ , etc.) ( <i>Denominators should be limited to 2, 3, 4 5, 6, 8, 10, 12, and 100</i> ) <b>Please note: Students need to understand simplifying to the lowest term.</b>
Fractions, Decimals and Percents	FDP Level 4	<b>F.H</b> (C)	Students can begin to understand addition and subtraction of fractions with like denominators. (fractions, mixed numbers, word problems)
Fractions, Decimals and Percents	FDP Level 5	<b>F.I</b> (4.NF.B.4 A, B, C)	Students can begin to understand multiplication of fractions. (fractions, mixed numbers, word problems)
Fractions, Decimals and Percents	FDP Level 6	<b>F.J</b> (4.NF.C.6 & 4.NF.C.7)	Students can use decimal notation for fractions with denominators of 10 or 100 and compare decimals in the hundredths.

**Fractional Geometry (PreK-2) / Numbers & Operations: Fractions (3-5) / Ratios & Proportions (6-7) / Functions (8)**

Measurement Topic	Scope Level	MSD Power Standards (CCSS)	Student Learning Targets
-------------------	-------------	-------------------------------	--------------------------

<b>Fractions, Decimals and Percents</b>	FDP Level 7	<b>F.K</b> (5.NF.1 5.NF.2)	Students can add and subtract fractions with unlike denominators. They can solve word problems using unlike denominators. (Including mixed numbers).
<b>Fractions, Decimals and Percents</b>	FDP Level 8	<b>F.L</b> (5.NF.3 -7)	Students can multiply and divide fractions fluently. (Including mixed numbers, improper fractions)

*--Middle School Benchmarks--*

<b>Ratios and Relationships</b>	RR Level 1	<b><u>RP.A</u></b> (6.RP.1)	Students understand the concept of a ratio and use ratio language to describe a ratio relationship.
<b>Ratios and Relationships</b>	RR Level 2	<b><u>RP.B</u></b> (6.RP.2, 6.RP.3)	Students understand the concept of unit rate $a/b$ associated with a ratio $a:b$ and can solve real-world and mathematical problems involving tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
<b>Ratios and Relationships</b>	RR Level 3	<b>RP.C</b> (7.RP.1)	Students can compute unit rates associated with ratios of fractions.

**Fractional Geometry (PreK-2) / Numbers & Operations: Fractions (3-5) / Ratios & Proportions (6-7) / Functions (8)**

<b>Measurement Topic</b>	<b>Scope Level</b>	<b>MSD Power Standards</b> (CCSS)	<b>Student Learning Targets</b>
<b>Ratios and Relationships</b>	RR Level 4	<b>RP.D</b> (7.RP.2.ab)	Students can use equivalent ratios to recognize a proportional relationship in tables, graphs, and verbal descriptions.
<b>Ratios and Relationships</b>	RR Level 5	<b>RP.E</b> (7.RP.2.d)	Students can examine points on a graph of a proportional relationship and explain what a given point means with respect to the unit rate.
<b>Ratios and Relationships</b>	RR Level 6	<b>RP.F</b> (7.RP.3)	Students can use proportional relationships to solve multistep ratio and percent problems such as: simple interest, tax, markups, gratuities, percent increase and decrease, and percent error.
<b>Functions</b>	F Level 1	<b>FN.A</b> (8.F.1)	Students can distinguish between functions and non-functions, using equations, graphs, and tables.
<b>Functions</b>	F Level 2	<b>FN.B</b> (8.F.2)	Students can compare functions from different representations.
<b>Functions</b>	F Level 3	<b>FN.C</b> (8.F.3)	Students can use equations, graphs, and tables to categorize functions as linear or nonlinear.

**Fractional Geometry (PreK-2) / Numbers & Operations: Fractions (3-5) / Ratios & Proportions (6-7) / Functions (8)**

Measurement Topic	Scope Level	MSD Power Standards (CCSS)	Student Learning Targets
----------------------	----------------	----------------------------------	-----------------------------

<b>Functions</b>	F Level 4	<b>FN.D</b> (8.F.4)	Students identify the rate of change (slope) and initial value (y-intercept) from tables, graphs, equations or verbal descriptions.
<b>Functions</b>	F Level 5	<b>FN.E</b> (8.F.5)	Given a verbal description of a situation, students can sketch a graph to model that situation. Given a graph of a situation, students can provide a verbal description of the situation.