

Grade 7 Math Learning Map

Prioritized Standard: MGSE7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. *The Number System - Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.*

	Proficiency Scale
4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. For example, the student will:
3.5	<u>Learning Target 1:</u> Create a real world situation and use the appropriate strategy to model the situation (i.e., using zero pairs or adding opposites) In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will <u>Learning Target 1:</u> Show that a number and its opposite have a sum of 0 (are additive inverses). Describe situations in which opposite quantities combine to make 0. For example, your bank account balance is -\$25.00. You deposit \$25.00 into your account. The net balance is \$0.00 (MGSE7.NS.1.a) <u>Learning Target 2:</u> Understand $p + q$ as the number located a distance $ q $ from p , in the positive or negative direction depending on whether q is positive or negative. Interpret sums of rational numbers by describing real world contexts (MGSE7.NS.1.b) <u>Learning Target 3:</u> Understand subtraction of rational numbers as adding the additive inverse, $?? - ?? = ?? + (- ??)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts (MGSE7.NS.1.c) <u>Learning Target 4:</u> Apply properties of operations as strategies to add rational numbers (MGSE7.NS.1.d) <u>Learning Target 5:</u> Apply properties of operations as strategies to subtract rational numbers (MGSE7.NS.1.d)
2.5	The student exhibits no major errors or omissions. No major errors or omissions regarding score 2.0 content and partial success at score 3.0
2.0	There are no major errors or omissions regarding the simpler details and processes. The student will recognize or recall specific vocabulary: <u>Learning Target 1:</u> additive inverse, absolute value The student will perform basic processes: <u>Learning Target 2:</u> Describe situations in which the distance between two numbers is the absolute value of the difference However, the student exhibits major errors or omissions regarding the more complex ideas and processes.
1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 and score 3.0
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Grade 7 Math Learning Map

Prioritized Standard: MGSE7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. The Number System - Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Proficiency Scale	
4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. For example, the student will:
3.5	Learning Target 1: Apply multiplication of integers to an exponent with a negative base. Identify patterns with even and odd exponents In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will Learning Target 1: Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts (MGSE7.NS.2.a) Learning Target 2: Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers then $- (p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts (MGSE7.NS.2.b) Learning Target 3: Apply properties of operations as strategies to multiply rational numbers (MGSE7.NS.2.c) Learning Target 4: Apply properties of operations as strategies to divide rational numbers (MGSE7.NS.2.c) Learning Target 5: Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats (MGSE7.NS.2.d)
2.5	The student exhibits no major errors or omissions. No major errors or omissions regarding score 2.0 content and partial success at score 3.0
2.0	There are no major errors or omissions regarding the simpler details and processes. The student will perform basic processes: Learning Target 1: Multiply fractions with unlike denominators Learning Target 2: Divide fractions with unlike denominators
1.5	However, the student exhibits major errors or omissions regarding the more complex ideas and processes. Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 and score 3.0
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Grade 7 Math Learning Map

Prioritized Standard: MGSE7.RP.2 Recognize and represent proportional relationships between quantities. Ratios and Proportional Relationships - Analyze proportional relationships and use them to solve real-world and mathematical problems.

	Proficiency Scale
4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. For example, the student will:
3.5	Learning Target 1: Compare and contrast a proportional vs. a non-proportional relationship using a table, equation, graph and words to explain your reasoning In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will Learning Target 1: Decide whether two quantities are in a proportional relationship by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin (MGSE7.RP.2.a) Learning Target 2: Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships (MGSE7.RP.2.b) Learning Target 3: Represent proportional relationships by equations (MGSE7.RP.2.c) Learning Target 4: Explain what the point (x,y) on a proportional graph means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate (MGSE7.RP.2.d)
2.5	The student exhibits no major errors or omissions. No major errors or omissions regarding score 2.0 content and partial success at score 3.0
2.0	There are no major errors or omissions regarding the simpler details and processes. The student will recognize or recall specific vocabulary: Learning Target 1: constant of proportionality (k/unit rate), linear, proportional relationship, complex fraction
1.5	However, the student exhibits major errors or omissions regarding the more complex ideas and processes. Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 and score 3.0
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Grade 7 Math Learning Map

Prioritized Standard: MGSE7.RP.3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, and fees. Ratios and Proportional Relationships - Analyze proportional relationships and use them to solve real-world and mathematical problems.

	Proficiency Scale
4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. For example, the student will:
3.5	Learning Target 1: Find the percent increase/decrease given the initial value and the new value and justify the processes used In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will Learning Target 1: Use proportional relationships to solve multi-step ratio problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions and fees Learning Target 2: Use proportional relationships to solve multi-step percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions and fees
2.5	The student exhibits no major errors or omissions. No major errors or omissions regarding score 2.0 content and partial success at score 3.0
2.0	There are no major errors or omissions regarding the simpler details and processes. The student will recognize or recall specific vocabulary: Learning Target 1: simple interest, tax, markup, markdown, gratuity, commissions, fees
	The student will perform basic processes: Learning Target 2: Find a fraction of a number Learning Target 3: Given a fraction of a number, find the whole Learning Target 4: Find a percent of a number Learning Target 5: Given a percent of a number, find the whole
	However, the student exhibits major errors or omissions regarding the more complex ideas and processes.
1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 and score 3.0
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Grade 8 Math Learning Map

Prioritized Standard: MGSE8.EE.8 Analyze and solve pairs of simultaneous linear equations (systems of linear equations). Expressions and Equations - Analyze and solve linear equations and pairs of simultaneous linear equations.

	Proficiency Scale
4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. For example, the student will:
3.5	Learning Target 1: Determine the best method to use to solve a given system of equations, and justify your answer In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will
	Learning Target 1: Solve real-world problems leading to two linear equations in two variables (MGSE8.EE.8.c) Learning Target 2: Solve mathematical problems leading to two linear equations in two variables (MGSE8.EE.8.c)
2.5	The student exhibits no major errors or omissions. No major errors or omissions regarding score 2.0 content and partial success at score 3.0
2.0	There are no major errors or omissions regarding the simpler details and processes. The student will recognize or recall specific vocabulary: Learning Target 1: system of equations, one solution, no solution, infinitely many solutions The student will perform basic processes: Learning Target 2: Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously (MGSE8.EE.8.a) Learning Target 3: Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection (MGSE8.EE.8.b)
1.5	However, the student exhibits major errors or omissions regarding the more complex ideas and processes. Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 and score 3.0
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success