

Name \_\_\_\_\_

7<sup>th</sup> Grade Standards Mastery Tracker

Ratios and Proportional Relationships	Level 1	Level 2	Level 3	Level 4	The Number System continued	Level 1	Level 2	Level 3	Level 4
I can calculate the unit rate for real life situations by breaking down the ratio (fractions) by dividing to solve the problem to find the relationship between two units. (7.RP.A.1)					I can describe situations where opposite quantities combine to make 0 (ex: A hydrogen atom has 0 charge because its two constituents are oppositely charged.). (7.NS.A.1a)				
I can recognize and represent a proportion as a statement of equality between two ratios. (7.RP.A.2)					I can represent and explain how a number and its opposite have a sum of 0 and are additive inverses. I can demonstrate and explain how when adding two numbers $p + q$ : *if $q$ is positive, the sum of $p$ and $q$ will be $ q $ spaces to the right of $p$ on a number line; *if $q$ is negative, the sum of $p$ and $q$ will be $ q $ spaces to the left of $p$ on a number line. I can explain and justify why the sum of $p + q$ is located a distance of $ q $ in the positive or negative direction from $p$ on a number line. (7.NS.A.1b)				
I can analyze two ratios to determine if they are proportional to one another with a variety of strategies (ex: using tables, graphs or pictures). (7.RP.A.2a)					I can represent how the distance between two rational numbers on a number line is the absolute value of their difference and apply this to real-world situations. I can identify subtraction of rational numbers as adding the additive inverse property to subtract rational numbers, $p - q = p + (-q)$ . (7.NS.A.1c)				
I can define constant of proportionality as a unit rate. I can analyze tables, graphs, equations, diagrams and verbal descriptions to identify unit rate. (7.RP.A.2b)					I can use properties of operations as strategies to add and subtract rational numbers. (7.NS.A.1d)				
I can represent proportional relationships by writing equations. (7.RP.A.2c)					I can apply what I have learned about multiplication and division of fractions to multiply and divide rational numbers. (7.NS.A.2)				
I can explain what the points on a graph of a proportional relationship mean in terms of a specific situation and recognize what (0,0) and (1,r) on a graph represents, where $r$ is the unit rate. (7.RP.A.2d)					I can recognize and describe the rules when multiplying signed numbers and apply the order of operations, particularly the distributive property, to multiply rational numbers (ex: $(-1)(-1)=1$ ). I can use the products of rational numbers to describe real-world situations. (7.NS.A.2a)				
I can apply proportional reasoning to solve multistep ratio and percent problems (ex: simple interest, tax, markups, markdowns, gratuities, commissions, fees, percent increase and decrease or percent errors). (7.RP.A.3)					I can explain why integers can be divided except when the divisor is 0 and describe why the quotient is always a rational number. I can understand and describe the rules when dividing signed numbers and integers and recognize that $-(p/q) = (-p)/q = p/(-q)$ . I can use the quotient of rational numbers to describe real-world situations. (7.NS.A.2b)				
The Number System					I can identify how properties of operations can be used to multiply and divide rational numbers (ex: distributive property, multiplicative inverse property, multiplicative identity, commutative property for multiplication and associative property for multiplication.) (7.NS.A.2c)				
I can apply what I have learned about addition and subtraction to add and subtract rational numbers. I can show addition and subtraction on a horizontal or vertical number line diagram. (7.NS.A.1)					I can change a rational number to a decimal using long division and explain how the decimal form of a rational number stops in zeroes or repeats. (7.NS.A.2d)				

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The Number System continued	Level 1	Level 2	Level 3	Level 4	Expressions and Equations continued	Level 1	Level 2	Level 3	Level 4
I can add, subtract, multiply and divide rational numbers. I can solve real-world problems by adding, subtracting, multiplying, and dividing rational numbers, including complex fractions. (7.NS.A.3)					I can identify and fluently solve equations in the form $px+q=r$ and $p(x+q)=r$ (ex: The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?). I can compare an arithmetic solution to an algebraic solution (7.EE.B.4a)				
Expressions and Equations					I can write and solve word problems leading to inequalities in the form $px + q > r$ or $px+q < r$ . I can graph and explain the solution of an inequality. (7.EE.B.4b)				
I can apply properties of operations to add, subtract, factor and expand linear expressions with rational coefficients. I can combine like terms to factor and expand linear expressions with rational coefficients using the distributive property. (7.EE.A.1)					ALEKS				
I can use properties of operations to write equivalent expressions. I can rewrite an expression in a different form if needed. (7.EE.A.2)					Rtl Tier 3, Rtl 7, MS Math 2				
I can apply properties of operations to calculate numbers in any form and convert between numerical forms when necessary. I can solve multi-step real-world and mathematical problems using positive and negative rational numbers in any form (whole numbers, fractions and decimals). I can determine if an answer makes sense using mental computation and estimation strategies. 7.EE.B.3)					End of Course Assessment				
I can use variables to represent numbers in real-world or mathematical problems and make reasonable simple equations and inequalities to solve problems. (7.EE.B.4)									

Level 1 = 1 pt., Level 2 = 2 pts., Level 3 = 3 pts., Level 4 = 4 pts. Grading Rubric points: A = (260-221 pts.), B = (220-181 pts.), C = (180-141 pts), D = (140-101pts.)