

## Grade 7 Accelerated Math Guaranteed/Viable Curriculum

*\* standards A7.21, A7.6, A7.23, and A7.38 are only in accelerated COS all others are in both. resource*

Number	Standard	Proficiency Timeline
7.4	<p>Apply and extend knowledge of operations of whole numbers, fractions, and decimals to add, subtract, multiply, and divide rational numbers including integers, signed fractions, and decimals.</p> <ol style="list-style-type: none"> <li>a. Identify and explain situations where the sum of opposite quantities is 0 and opposite quantities are defined as additive inverses.</li> <li>b. Interpret the sum of two or more rational numbers, by using a number line and in real-world contexts.</li> <li>c. Explain subtraction of rational numbers as addition of additive inverses.</li> <li>d. Use a number line to demonstrate 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.</li> <li>e. Extend strategies of multiplication to rational numbers to develop rules for multiplying signed numbers, showing that the properties of the operations are preserved.</li> <li>f. Divide integers and explain that division by zero is undefined. Interpret the quotient of integers (with a nonzero divisor) as a rational number.</li> <li>g. Convert a rational number to a decimal using long division, explaining that the decimal form of a rational number terminates or eventually repeats.</li> </ol>	1st
A7.21	<p>Solve multi-step linear equations in one variable, including rational number coefficients, and equations that require using the distributive property and combining like terms.</p> <ol style="list-style-type: none"> <li>a. Determine whether linear equations in one variable have one solution, no solution, or infinitely many solutions of the form <math>x = a</math>, <math>a = a</math>, or <math>a = b</math> (where <math>a</math> and <math>b</math> are different numbers).</li> </ol>	1st
7.3	<p>Solve multi-step percent problems in context using proportional reasoning, including simple interest, tax, gratuities, commissions, fees, markups and markdowns, percent increase, and percent decrease.</p>	1st
A7.6	<p>Interpret <math>y = mx + b</math> as defining a linear equation whose graph is a line with <math>m</math> as the slope and <math>b</math> as the <math>y</math>-intercept.</p>	2nd
A7.23	<p>Construct a function to model the linear relationship between two variables. a. Interpret the rate of change (slope) and initial value of the linear function from a description of a relationship from two points in a table or graph. [Grade 8, 16]</p>	2nd
7.13	<p>Use a number from 0 to 1 to represent the probability of a chance event occurring, explaining that larger numbers indicate greater likelihood of the event occurring, while a number near zero indicates an unlikely event.</p>	3rd
7.20	<p>Explain the relationships among circumference, diameter, area, and radius of a circle to demonstrate understanding of formulas for the area and circumference of a circle.</p> <ol style="list-style-type: none"> <li>a. Informally derive the formula for the area of a circle.</li> <li>b. Solve area and circumference problems in real-world and mathematical situations involving circles.</li> </ol>	3rd
7.21	<p>Use facts about supplementary, complementary, vertical, and adjacent angles in multi-step problems to write and solve simple equations for an unknown angle in a figure.</p>	4th

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A7.38	Analyze and apply properties of parallel lines cut by a transversal to determine missing angle measures.	4th
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