Pacing Guide for Acuity Readiness Form A Grade 8 - Math

Grade	Domain	Cluster	Cluster	Standard Skills	DOK
Grade 07	7.EE Expressions and Equations	Solve real-life and mathematical problems using numerical and algebraic expressions and equations	Solve real-life and mathematical problems using numerical and algebraic expressions and equations	7.EE.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.	Level 1 - Recall
Grade 07	7.EE Expressions and Equations	Solve real-life and mathematical problems using numerical and algebraic expressions and equations	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.	7.EE.4.b Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.G Geometry	Draw, construct, and describe geometrical figures and describe the relationships between them	Draw, construct, and describe geometrical figures and describe the relationships between them	7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.G Geometry	Draw, construct, and describe geometrical figures and describe the relationships between them	Draw, construct, and describe geometrical figures and describe the relationships between them	7.G.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.G Geometry	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume	7.G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.G Geometry	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume	7.G.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.G Geometry	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume	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.	Level 2 - Using Fundamental Concepts and Procedures

Grade	Domain	Cluster	Cluster	Standard Skills	DOK
Grade 07	7.NS The Number System	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers	7.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.	7.NS.1.b Understand p + q as the number located a distance absolute value(q) from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.NS The Number System	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers	7.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.	7.NS.1.c Understand subtraction of rational numbers as adding the additive inverse, p - q = p + (-q). 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.	Level 1 - Recognizing and Recalling
Grade 07	7.NS The Number System	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers	7.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.	7.NS.1.c Understand subtraction of rational numbers as adding the additive inverse, p - q = p + (-q). 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.	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.NS The Number System	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers	7.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.	7.NS.1.d Apply properties of operations as strategies to add and subtract rational numbers.	Level 1 - Recognizing and Recalling
Grade 07	7.RP Ratios and Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems	7.RP.2 Recognize and represent proportional relationships between quantities.	7.RP.2.a Decide whether two quantities are in a proportional relationship, e.g., 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.	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.RP Ratios and Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems	7.RP.2 Recognize and represent proportional relationships between quantities.	7.RP.2.b Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.RP Ratios and Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems	7.RP.2 Recognize and represent proportional relationships between quantities.	7.RP.2.d Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.	Level 2 - Using Fundamental Concepts and Procedures/ Level 1 - Recognizing and Recalling
Grade 07	7.RP Ratios and Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems	Analyze proportional relationships and use them to solve real-world and mathematical problems	7.RP.3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	Level 2 - Using Fundamental Concepts and Procedures
Grade 07	7.SP Statistics and Probability	Draw informal comparative inferences about two populations	Draw informal comparative inferences about two populations	7.SP.4 Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book	Level 2 - Using Fundamental Concepts and Procedures

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Grade 08	7.SP Statistics and Probability	Investigate chance processes and develop, use, and evaluate probability models	Investigate chance processes and develop, use, and evaluate probability models	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.	Level 1 - Recall
Grade 08	8.EE Expressions and Equations	Work with radicals and integer exponents	Work with radicals and integer exponents	8.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.	Level 1 - Recall
Grade 08	8.EE Expressions and Equations	Understand the connections between proportional relationships, lines, and linear equations	Understand the connections between proportional relationships, lines, and linear equations	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.	Level 2 - Using Fundamental Concepts and Procedures
Grade 08	8.EE Expressions and Equations	Analyze and solve linear equations and pairs of simultaneous linear equations	8.EE.7 Solve linear equations in one variable.	8.EE.7.a Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).	Level 2 - Using Fundamental Concepts and Procedures
Grade 08	8.EE Expressions and Equations	Analyze and solve linear equations and pairs of simultaneous linear equations	8.EE.8 Analyze and solve pairs of simultaneous linear equations.	8.EE.8.b Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.	~
Grade 08	8.F Functions	Use functions to model relationships between quantities	Use functions to model relationships between quantities	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.	Level 2 - Using Fundamental Concepts and Procedures
Grade 08	8.NS The Number System	Know that there are numbers that are not rational, and approximate them by rational numbers	Know that there are numbers that are not rational, and approximate them by rational numbers	8.NS.1 Understand informally that every number has a decimal expansion; the rational numbers are those with decimal expansions that terminate in 0s or eventually repeat. Know that other numbers are called irrational.	Level 2 - Using Fundamental Concepts and Procedures
Grade 08	8.NS The Number System	Know that there are numbers that are not rational, and approximate them by rational numbers	Know that there are numbers that are not rational, and approximate them by rational numbers	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., pi^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.	Level 2 - Using Fundamental Concepts and Procedures/ Level 1- Recall
Grade 08	8.SP Statistics and Probability	Investigate patterns of association in bivariate data	Investigate patterns of association in bivariate data	8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.	Level 2 - Using Fundamental Concepts and Procedures