

TCAP-EOC Algebra I Framework

Reporting Category 1: Mathematical Processes		%	# of Items
		20-26%	10-13
3102.1.1	Interpret patterns found in sequences, tables, and other forms of quantitative information using variables or function notation.		
3102.1.2	Write an equation symbolically to express a contextual problem.		
3102.1.3	Apply properties to evaluate expressions, simplify expressions, and justify solutions to problems.		
3102.1.4	Translate between representations of functions that depict real-world situations.		
3102.1.6	Determine and interpret slope in multiple contexts including rate of change in real-world problems.		

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Reporting Category 2: Number and Operations		%	# of Items
		10-12%	5-6
3102.2.1	Operate (add, subtract, multiply, divide, simplify, powers) with radicals and radical expressions including radicands involving rational numbers and algebraic expressions.		
3102.2.2	Multiply, divide, and square numbers expressed in scientific notation.		
3102.2.3	Describe and/or order a given set of real numbers including both rational and irrational numbers.		

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Reporting Category 3: Algebra		%	# of Items
		40-48%	20-24
3102.3.1	Express a generalization of a pattern in various representations including algebraic and function notation.		
3102.3.2	Operate with polynomials and simplify results.		
3102.3.3	Factor polynomials.		
3102.3.4	Operate with, evaluate, and simplify rational expressions including determining restrictions on the domain of the variables.		
3102.3.5	Write and/or solve linear equations, inequalities, and compound inequalities including those containing absolute value.		
3102.3.6	Interpret various relations in multiple representations.		
3102.3.7	Determine domain and range of a relation, determine whether a relation is a function and/or evaluate a function at a specified rational value.		
3102.3.8	Determine the equation of a line and/or graph a linear equation.		
3102.3.9	Solve systems of linear equation/inequalities in two variables.		
3102.3.10	Find the solution of a quadratic equation and/or zeros of a quadratic function.		
3102.3.11	Analyze nonlinear graphs including quadratic and exponential functions that model a contextual situation.		

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Reporting Category 4: Geometry and Measurement		%	# of Items
		10-12%	5-6
3102.4.2	Solve contextual problems using the Pythagorean Theorem.		
3102.4.3	Solve problems involving the distance between points or midpoint of a segment.		
3102.4.4	Convert rates and measurements.		

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Reporting Category 5: Data Analysis, Statistics, and Probability		%	# of Items
		10-12%	5-6
3102.5.1	Interpret displays of data to answer questions about the data set(s) (e.g., identify pattern, trends, and/or outliers in a data set).		
3102.5.3	Using a scatter-plot, determine if a linear relationship exists and describe the association between variables.		
3102.5.4	Generate the equation of a line that fits linear data and use it to make a prediction.		
3102.5.5	Determine theoretical and/or experimental probability of an event and/or its complement including using relative frequency.		