Test Code	Year	Form
1091	23	4
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2023 *STAAR Released* Blueprint
Algebra I
Spring, 2023–2024

SE Descriptions	Reporting Category	TEKS/SE	R or S	No. of Items	% of Test
1. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. The student is expected to determine the domain and range of a linear function in mathematical problems. determine reasonable domain and range values for real-world situations, both continuous and discrete. and represent domain and range using inequalities.	3	A.2A	R	2	4%
2. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. The student is expected to write linear equations in two variables given a table of values, a graph, and a verbal description.	3	A.2C	R	2	4%
3. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. The student is expected to write the equation of a line that contains a given point and is parallel to a given line.	3	A.2E	S	1	2%
4. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. The student is expected to write an equation of a line that is parallel or perpendicular to the *x*- or *y*-axis and determine whether the slope of the line is zero or undefined.	3	A.2G	S	1	2%
5. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. The student is expected to write linear inequalities in two variables given a table of values, a graph, and a verbal description.	3	A.2H	S	1	2%

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6. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. The student is expected to write systems of two linear equations given a table of values, a graph, and a verbal description.	3	A.2I	R	1	2%
7. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. The student is expected to determine the slope of a line given a table of values, a graph, two points on the line, and an equation written in various forms, including $y = mx + b$, $Ax + By = C$, and $y - y_1 = m(x - x_1)$.	2	A.3A	S	1	2%
8. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. The student is expected to calculate the rate of change of a linear function represented tabularly, graphically, or algebraically in context of mathematical and real-world problems.	2	A.3B	R	2	4%
9. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. The student is expected to graph linear functions on the coordinate plane and identify key features, including *x*-intercept, *y*-intercept, zeros, and slope, in mathematical and real-world problems.	2	A.3C	R	2	4%
10. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. The student is expected to graph the solution set of linear inequalities in two variables on the coordinate plane.	2	A.3D	R	2	4%
11. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. The student is expected to determine the effects on the graph of the parent function $f(x) = x$ when $f(x)$ is replaced by $af(x)$, $f(x) + d$, $f(x - c)$, $f(bx)$ for specific values of a, b, c, and d.	2	A.3E	S	1	2%

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12. Linear functions, equations, and inequalities. The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. The student is expected to estimate graphically the solutions to systems of two linear equations with two variables in real-world problems.	2	A.3G	S	1	2%
13. Linear functions, equations, and inequalities. The student applies the mathematical process standards to formulate statistical relationships and evaluate their reasonableness based on real-world data. The student is expected to calculate, using technology, the correlation coefficient between two quantitative variables and interpret this quantity as a measure of the strength of the linear association.	2	A.4A	S	1	2%
14. Linear functions, equations, and inequalities. The student applies the mathematical process standards to formulate statistical relationships and evaluate their reasonableness based on real-world data. The student is expected to write, with and without technology, linear functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.	2	A.4C	S	1	2%
15. Linear functions, equations, and inequalities. The student applies the mathematical process standards to solve, with and without technology, linear equations and evaluate the reasonableness of their solutions. The student is expected to solve linear equations in one variable, including those for which the application of the distributive property is necessary and for which variables are included on both sides.	3	A.5A	R	2	4%
16. Linear functions, equations, and inequalities. The student applies the mathematical process standards to solve, with and without technology, linear equations and evaluate the reasonableness of their solutions. The student is expected to solve systems of two linear equations with two variables for mathematical and real-world problems.	3	A.5C	R	2	4%
17. Quadratic functions and equations. The student applies the mathematical process standards when using properties of quadratic functions to write and represent in multiple ways, with and without technology, quadratic equations. The student is expected to determine the domain and range of quadratic functions and represent the domain and range using inequalities.	4	A.6A	R	2	4%
18. Quadratic functions and equations. The student applies the mathematical process standards when using properties of quadratic functions to write and represent in multiple ways, with and without technology, quadratic equations. The student is expected to write equations of quadratic functions given the vertex and another point on the graph, write the equation in vertex form ($f(x) = a(x - h)^2 + k$), and rewrite the equation from vertex form to standard form ($f(x) = ax^2 + bx + c$).	4	A.6B	S	1	2%

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19. Quadratic functions and equations. The student applies the mathematical process standards when using properties of quadratic functions to write and represent in multiple ways, with and without technology, quadratic equations. The student is expected to write quadratic functions when given real solutions and graphs of their related equations.	4	A.6C	S	1	2%
20. Quadratic functions and equations. The student applies the mathematical process standards when using graphs of quadratic functions and their related transformations to represent in multiple ways and determine, with and without technology, the solutions to equations. The student is expected to graph quadratic functions on the coordinate plane and use the graph to identify key attributes, if possible, including *x*-intercept, *y*-intercept, zeros, maximum value, minimum values, vertex, and the equation of the axis of symmetry.	4	A.7A	R	2	4%
21. Quadratic functions and equations. The student applies the mathematical process standards when using graphs of quadratic functions and their related transformations to represent in multiple ways and determine, with and without technology, the solutions to equations. The student is expected to describe the relationship between the linear factors of quadratic expressions and the zeros of their associated quadratic functions.	4	A.7B	S	1	2%
22. Quadratic functions and equations. The student applies the mathematical process standards when using graphs of quadratic functions and their related transformations to represent in multiple ways and determine, with and without technology, the solutions to equations. The student is expected to determine the effects on the graph of the parent function $f(x) = x^2$ when $f(x)$ is replaced by $af(x)$, $f(x) + d$, $f(x - c)$, $f(bx)$ for specific values of a, b, c, and d.	4	A.7C	R	1	2%
23. Quadratic functions and equations. The student applies the mathematical process standards to solve, with and without technology, quadratic equations and evaluate the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. The student is expected to solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula.	4	A.8A	R	1	2%
24. Quadratic functions and equations. The student applies the mathematical process standards to solve, with and without technology, quadratic equations and evaluate the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. The student is expected to write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.	4	A.8B	S	1	2%

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25. Exponential functions and equations. The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. The student is expected to determine the domain and range of exponential functions of the form $f(x) = ab^x$ and represent the domain and range using inequalities.	5	A.9A	S	1	2%
26. Exponential functions and equations. The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. The student is expected to interpret the meaning of the values of a and b in exponential functions of the form $f(x) = ab^x$ in real-world problems.	5	A.9B	S	1	2%
27. Exponential functions and equations. The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. The student is expected to write exponential functions in the form $f(x) = ab^x$ (where b is a rational number) to describe problems arising from mathematical and real-world situations, including growth and decay.	5	A.9C	R	2	4%
28. Exponential functions and equations. The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. The student is expected to graph exponential functions that model growth and decay and identify key features, including y-intercept and asymptote, in mathematical and real-world problems.	5	A.9D	R	2	4%
29. Number and algebraic methods. The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms and perform operations on polynomial expressions. The student is expected to multiply polynomials of degree one and degree two.	1	A.10B	S	1	2%
30. Number and algebraic methods. The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms and perform operations on polynomial expressions. The student is expected to determine the quotient of a polynomial of degree one and polynomial of degree two when divided by a polynomial of degree one and polynomial of degree two when the degree of the divisor does not exceed the degree of the dividend.	1	A.10C	S	1	2%

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31. Number and algebraic methods. The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms and perform operations on polynomial expressions. The student is expected to rewrite polynomial expressions of degree one and degree two in equivalent forms using the distributive property.	1	A.10D	S	1	2%
32. Number and algebraic methods. The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms and perform operations on polynomial expressions. The student is expected to factor, if possible, trinomials with real factors in the form $ax^2 + bx + c$, including perfect square trinomials of degree two.	1	A.10E	R	2	4%
33. Number and algebraic methods. The student applies the mathematical process standards and algebraic methods to rewrite algebraic expressions into equivalent forms. The student is expected to simplify numerical radical expressions involving square roots.	1	A.11A	S	1	2%
34. Number and algebraic methods. The student applies the mathematical process standards and algebraic methods to rewrite algebraic expressions into equivalent forms. The student is expected to simplify numeric and algebraic expressions using the laws of exponents, including integral and rational exponents.	1	A.11B	R	2	4%
35. Number and algebraic methods. The student applies the mathematical process standards and algebraic methods to write, solve, analyze, and evaluate equations, relations, and functions. The student is expected to evaluate functions, expressed in function notation, given one or more elements in their domains.	1	A.12B	S	1	2%
36. Number and algebraic methods. The student applies the mathematical process standards and algebraic methods to write, solve, analyze, and evaluate equations, relations, and functions. The student is expected to identify terms of arithmetic and geometric sequences when the sequences are given in function form using recursive processes.	1	A.12C	S	1	2%
37. Number and algebraic methods. The student applies the mathematical process standards and algebraic methods to write, solve, analyze, and evaluate equations, relations, and functions. The student is expected to solve mathematic and scientific formulas, and other literal equations, for a specified variable.	1	A.12E	S	1	2%

Item Types by Point			Total			
	1-point questions (MC & TE Items)	41		**R**	27	54%
	2-point questions (TE Items)	9		**S**	18	36%
	Total	59		**All**	50	100%

Note: ***R*** = *Readiness Standard*, ***S*** = *Supporting Standard*. Percentages are rounded to the nearest whole number.

Reporting Categories: 1. Numerical Representations and Relationships
2. Computations and Algebraic Relationships
3. Geometry and Measurement
4. Data Analysis and Personal Finance