Assessment Blueprint - Unit 8 Quadratic Equations

Unit 8 Overview and Readiness (prerequisite skill assessment)

Item	TEKS
1	A10(B) multiply polynomials of degree one and degree two *(from Unit 6)*
2	A7(A) 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 *(from Unit 7)*
3	A7(A) 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 *(from Unit 7)*

Unit 8 Section A

Item	TEKS
1	A10(D) rewrite polynomial expressions of degree one and degree two in equivalent forms using the distributive property
2	A7(A) 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
3	A5(A) 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
4	A8(A) solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula
5	A8(A) solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula

Unit 8 Section B

Item	TEKS
1	A8(A) solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula
2	A7(A) 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
3	A10(E) factor, if possible, trinomials with real factors in the form ax^2+bx+c, including perfect square trinomials of degree two
4	A10(E) factor, if possible, trinomials with real factors in the form ax^2+bx+c, including perfect square trinomials of degree two
5	A7(B) describe the relationship between the linear factors of quadratic expressions and the zeros of their associated quadratic functions

Unit 8 Section C

Item	TEKS
1	A6(C) write quadratic functions when given real solutions and graphs of their related equations
2	A6(C) write quadratic functions when given real solutions and graphs of their related equations
3	A6(C) write quadratic functions when given real solutions and graphs of their related equations
4	A8(B) write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems
5	A8(B) write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems

Unit 8 Quiz

Item	TEKS
1	A12(E) solve mathematic and scientific formulas, and other literal equations, for a specified variable
2	A8(A) solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula
3	A8(A) solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula
4	A8(A) solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula
5	A10(E) factor, if possible, trinomials with real factors in the form ax^2+bx+c, including perfect square trinomials of degree two
6	A10(E) factor, if possible, trinomials with real factors in the form ax^2+bx+c, including perfect square trinomials of degree two
7	A10(F) decide if a binomial can be written as the difference of two squares and, if possible, use the structure of a difference of two squares to rewrite the binomial
8	A10(E) factor, if possible, trinomials with real factors in the form ax^2+bx+c, including perfect square trinomials of degree two
9	A6(C) write quadratic functions when given real solutions and graphs of their related equations
10	A8(B) write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems
11	A10(E) factor, if possible, trinomials with real factors in the form ax^2+bx+c, including perfect square trinomials of degree two
12	A7(A) 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

Unit 8 STAAR Review

Item	TEKS
1	A8(A) solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula
2	A8(A) solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula
3	A8(B) write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems
4	A8(B) write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems
5	A6(C) write quadratic functions when given real solutions and graphs of their related equations
6	A6(A) determine the domain and range of quadratic functions and represent the domain and range using inequalities
7	A10(E) factor, if possible, trinomials with real factors in the form ax^2+bx+c, including perfect square trinomials of degree two
8	A9(C) 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
9	A3(B) calculate the rate of change of a linear function represented tabularly, graphically, or algebraically in context of mathematical and real-world problems
10	A2(I) write systems of two linear equations given a table of values, a graph, and a verbal description

Unit 8 Project

TEKS
A8(A) solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula.