Alg1 Texas TEKS/STAAR/EOC (Second Semester)

Legend:

Example **3[R]-A.5(B)**

- 3, The reporting category
- [R], Either Readiness or Supporting
- A.5, The TEKS
- (B) Expectation

[P], indicates a prerequisite skill

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Unit 11: Inequality review

Advanced inequalities

Lesson 01: Review of one-dimensional inequalities **1[R]-A.1(D); 2[S]-A.2(A);3[S]-A.5(A); 3[S]-A.5(B); 4[S]-A.7(A); 4[R]-A.7(B); 4[S]-A.7(C)**

Compound inequalities **1[R]-A.1(D); 2[S]-A.2(A);3[S]-A.5(A); 3[S]-A.5(B); 4[S]-A.7(A); 4[R]-A.7(B); 4[S]-A.7(C)**

Lesson 02: Graphing inequalities in two dimensions **1[R]-A.1(D); 2[S]-A.2(A);3[S]-A.5(A); 3[S]-A.5(B); 4[S]-A.7(A); 4[R]-A.7(B); 4[S]-A.7(C)**

Lesson 03: Solving systems of two-dimensional inequalities **1[R]-A.1(D); 2[S]-A.2(A);3[S]-A.5(A); 3[S]-A.5(B); 4[S]-A.7(A); 4[R]-A.7(B); 4[S]-A.7(C)**

Lesson 04: Inequality applications (word problems) **1[R]-A.1(D); 2[S]-A.2(A);3[S]-A.5(A); 3[S]-A.5(B); 4[S]-A.7(A); 4[R]-A.7(B); 4[S]-A.7(C)**

Cumulative review

Unit 11 review

Unit 11 test

Unit 12: Polynomials

Lesson 01: Adding and subtracting polynomials **2[R]-A.4(A)**

Lesson 02: Multiplying monomials **2[R]-A.4(A)**

Lesson 03: Raising monomials to a power **5[S]-A.11(A); 5[S]-A.11(C); 2[R]-A.4(A)**

Lesson 04: Multiplying polynomials **2[R]-A.4(A)**

Lesson 05: Mixed multiplication of polynomials and monomials **2[R]-A.4(A)**
Geometry applications **2[R]-A.4(A)**

Cumulative review
Unit 12 review
Unit 12 test

Unit 13: Dividing polynomials
Greatest common factor

Lesson 01: Dividing monomials **2[R]-A.4(A)**

Lesson 02: Dividing polynomials by monomials **2[R]-A.4(A)**
Negative exponents **5[S]-A.11(A); 5[S]-A.11(C); 2[R]-A.4(A)**

Lesson 03: Finding the greatest common factor (GCF) **[P]**

Lesson 04: Using GCF to factor polynomials **[P]; 2[R]-A.4(A)**

Cumulative review
Unit 3 review
Unit 13 test

Unit 14: Factoring trinomials

Lesson 01: Fundamentals of "box" factoring of trinomials **2[R]-A.4(A)**
Sum and product practice **2[R]-A.4(A)**

Lesson 02: Practice with the "box" technique of factoring trinomials **2[R]-A.4(A)**

Lesson 03: More factoring practice with trinomial factoring **2[R]-A.4(A)**
Exceptional cases **2[R]-A.4(A)**

Lesson 04: Factoring trinomials with two variables **2[R]-A.4(A)**

Lesson 05: Difference of squares ($a^2 - b^2$) **2[R]-A.4(A)**

Lesson 06: Mental factoring, $(a + b)^2$, $(a – b)^2$ **2[R]-A.4(A)**
Areas represented by trinomials **2[R]-A.4(A)**

Cumulative review
Unit 14 review
Unit 14 test

Unit 15: Solving equations by factoring
Quadratic formula

Lesson 01: Solving equations by factoring **5[S]-A.9(B); 5[S]-A.9(C); 5[R]-A.10(A)**
The degree of an equation **5[S]-A.9(B); 5[S]-A.9(C); 5[R]-A.10(A)**

Lesson 02: More practice solving equations by factoring **5[S]-A.9(B); 5[S]-A.9(C); 5[R]-A.10(A)**
Finding the roots (zeros) of a polynomial **5[S]-A.9(B); 5[S]-A.9(C); 5[R]-A.10(A)**

Lesson 03: Solving equations using the Quadratic Formula **5[S]-A.9(B); 5[S]-A.9(C); 5[R]-A.10(A); 5[S]-A.10(B)**

Lesson 04: More practice with the Quadratic Formula **5[S]-A.9(B); 5[S]-A.9(C); 5[R]-A.10(A); 5[S]-A.10(B)**
The discriminant, special cases **5[S]-A.9(B); 5[S]-A.9(C); 5[R]-A.10(A);**

Lesson 05: Applications of quadratic functions **5[S]-A.9(B); 5[S]-A.9(C); 5[R]-A.10(A); 5[S]-A.10(B)**
Evaluating quadratic functions **5[S]-A.9(B); 5[S]-A.9(C); 5[R]-A.10(A); 5[S]-A.10(B)**

Cumulative review
Unit 15 review
Unit 15 test

Unit 16: Graphing quadratic functions

Lesson 1: Quadratic graph (parabola) fundamentals **5[S]-A.9(B); 5[S]-A.9(C); 5[S]-A.9(D);5[R]-A.10(A)**

Lesson 2: Investigating the effect of *a* & *b* in $y = ax^2 + b$ **5[S]-A.9(B); 5[S]-A.9(C); 5[S]-A.9(D);5[R]-A.10(A)**

Domain and range of quadratic functions **5[S]-A.9(B); 5[S]-A.9(C); 5[S]-A.9(D);5[R]-A.10(A)**

Lesson 3: Graphing quadratic functions on the calculator **5[S]-A.9(B); 5[S]-A.9(C); 5[S]-A.9(D);5[R]-A.10(A)**
Finding minimum or maximum point (vertex) **5[S]-A.9(B); 5[S]-A.9(C); 5[S]-A.9(D);5[R]-A.10(A)**

Lesson 4: Solving quadratic equations with a graphing calculator
(Finding roots) **5[S]-A.9(B); 5[S]-A.9(C); 5[S]-A.9(D);5[R]-A.10(A)**

Lesson 5: Evaluating quadratic functions (manually & calculator)
Putting it all together **5[S]-A.9(B); 5[S]-A.9(C); 5[S]- A.9(D);5[R]-A.10(A)**

Cumulative review
Unit 16 review
Unit 16 test

Unit 17: Exponential functions and radicals

Lesson 1: Graphs of exponential functions **5[S}-A.11(A); 5[S}-A.11(B); 5[S}-A.11(C)**

Lesson 2: Exponential growth & decay word problems **5[S]-A.11(A); 5[S]-A.11(B); 5[S]-A.11(C)**

Lesson 3: Square root fundamentals **2[R]-A.4(A)**

Lesson 4: Simplification of variable radical expressions **2[R]-A.4(A)**
Solving equations by taking the square root **2[R]-A.4(A)**

Lesson 5: Adding and subtracting radicals **2[R]-A.4(A)**

Lesson 6: Multiplying and dividing radicals **2[R]-A.4(A)**

Cumulative review
Unit 17 review
Unit 17 test

Unit 18: Common word problems

Lesson 1: Distance, rate, and time type problems **1[S]-A.1(A); 1[S]-A.1(B); 1[S]-A.1(C)**

Lesson 2: Coin type word problems **2[R]-A.2(D)**

Lesson 3: Age type word problems **2[S]-A.3(B)**

Lesson 4: Mixture type word problems **1[S}-A.1(B)**

Lesson 5: Work type word problems **1[R]-A.(E)**

Cumulative review
Unit 17 review
Unit 17 test

Unit 19: Pythagorean theorem, distance & midpoint formulas
Area and volume

Lesson 1: The Pythagorean theorem, Pythagorean triples **2[R]-A.4(A)**

Lesson 2: The distance formula **2[R]-A.4(A)**

Lesson 3: The midpoint formula **2[R]-A.4(A)**

Lesson 4: Special areas and volumes **[P]**
Effects of scale factor changes **[P]**

Cumulative review
Unit 19 review
Unit 19 test

Semester summary
Semester review
Semester test

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Enrichment Topics

Topic A: Commutative, distributive, and associative properties **2[R]-A.4(B)**

Topic B: Inequality conjunctions and disjunctions **1[R]-A.1(D); 2[S]-A.2(A); 3[S]-A.5(A); 3[S]-A.5(B); 4[S]-A.7(A); 4[R]-A.7(B); 4[S]-A.7(C)**

Topic C: Two dimensional inequalities **1[R]-A.1(D); 2[S]-A.2(A); 3[S]-A.5(A); 3[S]-A.5(B); 4[S]-A.7(A); 4[R]-A.7(B); 4[S]-A.7(C)**

Topic D: Combining direct and indirect variations **3[S]-A.6(G)**

Topic E: Scientific notation **[P]**

Topic F: Greatest common factor (GCF) and least common multiple (LCM) **[P]**

Topic G: Derivation of the Quadratic Formula **5[S]-A9(B); 5[S]-A.9(C); 5[R]-A.10(A); 5[R]-A.10(B);**

Topic H: Completing the square **5[S]-A9(B); 5[S]-A.9(C); 5[R]-A.10(A)**

Topic I: Statistics **[P]**

Topic J: Conic section applications **5[R]-A.9(D), 5-A.11**