CVUSD Integrated Math 2 Scope and Sequence 2018-2019

SEMESTER 1

Review Week 1 Evaluating Expressions Solving linear equations and inequalities Graphing linear equations and inequalities

Unit 1: Quadratic Expressions and Equations **Time: 20 days**
Lesson 1-1: Adding and Subtracting Polynomials [A.SSE.1a, A.APR.1]
Lesson 1-2: Multiplying a Polynomial by a Monomial [A.APR.1]
Lesson 1-3: Multiplying Polynomials [A.APR.1]
Lesson 1-4: Special Products [A.APR.1]
Mid chapter review and TEST
Lesson 1-5: Using the Distributive Property *GCF* [A.SSE.2, A.SSE.3a]
Lesson 1-6: Solving $x^2 + bx + c = 0$ [A.SSE.3a, A.REI.4b]
Lesson 1-7: Solving $ax^2 + bx + c = 0$ *Word Problems with area and perimeter with polynomials* [A.SSE.3a, A.REI.4b]
Lesson 1-8: Differences of Squares [A.SSE.3a, A.REI.4b]
Lesson 1-9: Perfect Squares [A.SSE.3a, A.REI.1]
Unit 1 Review and TEST

Unit 2: Quadratic Functions and Equations Time: 25 days
Compare Quadratic and Exponential equations, first and second differences Resource: MVP 1.5 and 2.6 in text [F.LE.3]
Lesson 2-1: Graphing Quadratic Functions [F.IF.4, 7a]
Quadratic Function Rate of Change Resource: supplement with compare linear, exponential and quadratic equations worksheet [F.IF.4,6]
Intervals where quadratic functions are increasing/decreasing using Interval Notation Resource: supplement [F.IF.4]
Lesson 2-2 Solving Quadratic Equations by Graphing (standard form, vertex form) [A.REI.4]
Lesson 2-4: Solving Quadratic Equations by Completing the Square [A.REI.4, F.IF.8a]
Lesson 2-3/3-4: Transformation of Quadratic Function [A.SSE.3b, F.IF.7a]
2-4 Lab: Finding the Maximum or Minimum Value (emphasis on converting standard form to vertex form, including maximum and minimum) [A.REI.4b, F.IF.7a]
Putting it all together- Standard Form to Vertex form, Standard Form to Factored Form and vice versa Resource: supplement [A.SSE.3]
11-8 Geometry Lab: Parabolas *Use with string* [G.GPE.2]
2-5 Solving Quadratic Equations using Quadratic Formula [A.REI.4]
3-1 Quadratic Regression Resource: add supplemental for reinforcement [F.IF.4]

Solving Systems of Quadratic and Linear Equations Resource: supplement [A.REI.7]
Unit 2 Review and TEST

Unit 3: Radicals & Complex Numbers **Time: 10 days**
Lesson 4-3: Simplifying Radical Expression [A.REI.4a]
Lesson 3-2: Complex Numbers [N.CN.1, 2]
Lesson 3-3: The Quadratic Formula (emphasis on real on complex solutions, algebraically and graphically) [N.CN.7, A.SSE.1b]
Application on Quadratic Projectile Motion Resource: supplement [F.LE.6]
Unit 3 Review and TEST

Unit 4: Exponential Functions and Relations **Time: 11 days**
Lesson 4-4 Operations with Radical Expressions [N.RN.2]
Extend the properties of exponents to rational exponents [N.RN.1 and N.RN.2, N.RN.3]
Lesson 4-4 Operations with Radical Expressions [N.RN.2]
2.7 Special Functions (Piecewise, Step and Absolute Value) Resources: Supplement for piecewise to include quadratic, absolute value, exponential, etc. [F.IF.7b, N.RN.2, A.CED.2]

Unit 4 Review and TEST

Semester 1 Finals
Time: review days / final
Semester 1 Review
Semester 1 FINAL

SEMESTER 2

Unit 5: Reasoning and Proof
Time: 15 days
Lesson 5-1: Postulates and Vocabulary, such as points, lines and planes [G.MG.3]
Lesson 5-2: Algebraic Proof [G.CO.9]
Lesson 5-3: Proving Segment Relationships [G.CO.9, 12]
Lesson 5-4: Proving Angle Relationships e.g. complementary and supplementary [G.CO.9]
Lesson 5-5: Angles and Parallel Lines [G.CO.9]
Lesson 5-6: Proving Lines Parallel [G.CO.9, 12]
Unit 5 Review and TEST

Unit 6: Congruent Triangles
Time: 15 days
Lesson 6-1: Angles of Triangles

[G.CO.10]
Triangle congruence on a coordinate plane using rigid motion Resource: supplement [G.CO.10]
Lesson 6-2: Congruent Triangles [G.CO.7, G.SRT.5]
Lesson 6-3: Proving Triangles Congruent – SSS, SAS [G.CO.10, G.SRT.5]
Lesson 6-4: Proving Triangles Congruent – ASA, AAS Geometry Lab 6-4: Congruence in Right Triangles (if time permits) [G.CO.10, G.SRT.5]
Lesson 6-5: Isosceles and Equilateral Triangles [G.CO.10, 12]
Lesson 6-6 Triangles and Coordinate Proof [G.CO.10, G.GPE.4]
Unit 6 Review and TEST

Unit 7: Relationships in Triangles **Time: 6 days**
Lesson 7.1/7.2 Lab Constructing Median, Incenter, and Circumcenter of a Triangle *Use Patty Paper* [G.CO.10, G.C.3]
Lesson 7-3: Inequalities in One Triangle [G.CO.10]
Lesson 7-5: Triangle Inequality Theorem [G.CO.10, G.MG.3]
Unit 7 Review and TEST

Unit 8: Quadrilaterals ***Add Coordinate Plane to all sections G.GPE.4*** **Time: 12 days**
Lesson 8-1: Angles of Polygons [G.MG.1]
Lesson 8-2: Parallelograms

[G.CO.11, G.GPE.4]
Lesson 8-3: Test for Parallelograms [G.CO.11, G.GPE.4]
Lesson 8-4: Rectangles [G.CO.11, G.GPE.4]
Lesson 8-5: Rhombi and Squares [G.CO.11, G.GPE.4]
Lesson 8-6: Trapezoids and Kites [G.GPE.4, G.MG.3]
Unit 8 Review and TEST

Unit 9: Proportions and Similarities **Time: 13 days**
Lesson 10-8: Dilations using side splitter theorem Resource: supplement with text [G.CO.2, G.SRT.1]
Lesson 9-6 Similar Transformations Show mapping as transformation {(x,y)—(2x+3,2y-9)}
Lesson 9-1: Ratios and Proportions [G.MG.3]
Lesson 9-2: Similar Polygons [G.SRT.2]
Lesson 9-3: Similar Triangles [G.SRT.4, 5]
Lesson 9-4: Parallel Lines and Proportional Parts [G.SRT.4, 5]
Lesson 9-5: Parts of Similar Triangles [G.SRT.4, 5]
Unit 9 Review and TEST

Unit 10: Right Triangles and Trigonometry Time: 12 days
Lesson 10-1: Geometric Mean [G.SRT.5]
Lesson 10-3: Special Right Triangles (One day on 45 45 90 & 30-60-90; Second day review both together) [G.SRT.6]
Convert Between Degrees and Radians Resource: Supplement Lab with ¼ Circles [G.C.5]
Lesson 10-4: Trigonometry (Ratios; missing sides; missing angles; review all trigonometric ratios) [G.SRT.6, 7]
Lesson 10-5: Angles of Elevation and Depression (Angles of elevation and depression) Activity(optional) [G.SRT.8]
Unit 10 Review and TEST

Interim Assessment Block (IAB)—Geometry and Right Triangle Trigonometry Time: 1 day
Reserve computer lab with school administrator well in advance of desired IAB testing day.

Unit 11: Circles
Time: 15 days
Lesson 11-1: Circles and Circumference [G.CO.1, G.C.1]
Lesson 11-2: Measuring Angles and Arcs (Conversions radians /degrees) [G.C.2, 5]
Lesson 11-3: Arcs and Chords [G.C.2, G.MG.3]
Lesson 11-4: Inscribed Angles [G.C.2, 3]
Lesson 11-5: Tangents [G.CO.12, G.C.4]
Lesson 11-6: Secants, Tangents, and Angle Measures [G.C.4]
Lesson 11-7: Special Segments in a Circle [G.C.4]
Lesson 11-8: Equation of Circles [G.GPE.1, 6]
Prove all circles are similar using dilations Resource: supplement [G.C.1]
Lesson 11-9: Areas of Circles and Sectors [G.C.5, G.MO.1]
Unit 11 Review and TEST

Unit 12: Extending Surface Area and Volume
Time: 6 days
Lesson 12-4: Volume of Prisms and Cylinders [G.MG.1, G.GMD.3]
Lesson 12-5: Volume of Pyramids and Cones [G.GMD.1, 3]
Lesson 12-6: Surfaces and Volumes of Spheres [G.GMD.1, 3]
Unit 12 Review and TEST

Chapter 13: Probability and Measurement Time: 8 days
Lesson 0-3: Simple Probability
Lesson 13-1: Representing Sample Probability [S.CP.1]
Lesson 13-5: Probability of Independent and Dependent Events [S.CP.2, 3,5]
Lesson 13-5 Lab Two Way Frequency Tables [S.CP.4]
Lesson 13-6: Probabilities of Mutually Exclusive Events [S.CP.1, 7]
Unit 13 Review and TEST

Projects, performance tasks, group activities Time: 10 days

Semester 2 Finals Time: review days / finals
Semester 1 Review
Semester 1 FINAL