

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT



Integrated Math 2

Board Approval Date: March 18, 2021	Course Length: 2 Semesters
Grading: A-F	Credits: 5 Credits per Semester
Proposed Grade Level(s): 9, 10, 11, 12	Subject Area: Mathematics Elective Area (if applicable):
Prerequisite(s): C- or better in Integrated Math 1 or Integrated Math 1 (10) or completion of Integrated Math 2 Foundations or Integrated Math 2 Foundations (10)	Corequisite(s):
CTE Sector/Pathway: N/A	
Intent to Pursue 'A-G' College Prep Status: Yes	
A-G Course Identifier: (c) Mathematics	
Graduation Requirement: Yes	
Course Intent: District Course Program (if applicable):	
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COURSE DESCRIPTION:

Integrated Math 2 is designed to extend the mathematics that students learned in Integrated Math 1 to the family of quadratic expressions, equations, and functions. The standards are based on the Common Core State Standards for Mathematics and include topics from the conceptual categories: Number and Quantity, Algebra, Functions, Geometry, and Statistics and Probability. Instructional time will focus on

five critical areas: (1) extending the laws of exponents to rational exponents; (2) comparing key characteristics of quadratic functions with those of linear and exponential functions; (3) creating and solving equations and inequalities involving linear, exponential and quadratic expressions; (4) extending work with probability; and (5) establishing criteria for similarity of triangles based on dilations and proportional reasoning.

As stated in the Mathematics Framework (2013), the focus of Integrated Math 2 is on quadratic expressions, equations, and functions, and on comparing the characteristics and behavior of these expressions, equations, and functions to those of linear and exponential relationships learned in Integrated Math 1. Links between probability and data are explored through conditional probability and counting methods and involve the use of probability and data in making and evaluating decisions. The study of similarity leads to an understanding of right-triangle trigonometry and connects to quadratics through Pythagorean relationships. This course includes the study of circles with their quadratic algebraic representations.

The courses in the Integrated Pathway follow the structure introduced in the K-8 grade levels of the California Common Core State Standards for Mathematics (CA CCSSM), presenting mathematics as a coherent subject and blend standards from different conceptual categories.

DETAILED UNITS OF INSTRUCTION:

Unit Number/Title	Unit Essential Questions	Examples of Formative Assessments	Examples of Summative Assessment
<p>1. Functions and Exponents</p>	<p>How do the values of a,h, and k affect the graph of the absolute value function $g(x) = a x-h + k$?</p> <p>How can you describe a function that is represented by more than one equation?</p> <p>How are a function and its inverse related?</p> <p>How can you write general rules involving properties of exponents?</p> <p>How can you write and evaluate an nth root of a number?</p> <p>What are some of the characteristics of the graph of an exponential function?</p>	<p>*Turn and Talk</p> <p>*Think-Pair-Share</p> <p>*Whiteboarding</p>	<p>*Free Response problems that include evaluating, graphing, and writing piecewise functions, including step and absolute value functions</p> <p>*Finding inverses of relations and linear functions</p> <p>evaluating and simplifying expressions with exponents, including rational exponents; graph exponential growth and decay functions and identify growth and decay factors; writing exponential growth and decay models and recursive rules for exponential functions;</p>

			and rewriting exponential functions to identify the percent rate of change.
2. Polynomial Equations and Factoring	<p>How can you add and subtract polynomials?</p> <p>How can you multiply two polynomials?</p> <p>What are the patterns in the special products $(a+b)(a-b)$ and $(a-b)^2$?</p> <p>How can you solve a polynomial equation?</p> <p>How can you use algebra tiles to factor the trinomial $x^2 + bx + c$ into the product of two binomials?</p> <p>How can you recognize, use, and factor special products?</p> <p>How can you factor a polynomial completely?</p>	<p>*Exit Ticket</p> <p>*Point of Most Significance</p> <p>*Turn and Talk</p> <p>*Think-Pair-Share</p> <p>*Whiteboarding</p>	<p>*Free Response problems that include Priority Standards from Chapter 1, along with a focus on classifying, adding and subtracting polynomials</p> <p>*Multiplying two binomials using the FOIL method, the square of a binomial pattern, and the sum and difference pattern</p> <p>*Multiplying binomials and trinomials</p> <p>*Solving polynomial equations by using the Zero-Product Property and by factoring out the GCF</p> <p>*Factoring $x^2 + bx + c$, ax^2+bx+c, and perfect square trinomials</p> <p>*Factoring polynomials as the difference of two squares and by grouping; and using factoring to solve real-life problems involving polynomial equations.</p>
3. Graphing Quadratic Functions	<p>What are some of the characteristics of the graph of a quadratic function of the form $f(x)= ax^2$?</p> <p>How does the value of c affect the graph of $f(x)=ax^2 + c$?</p> <p>How can you find the vertex of the graph of $f(x)=ax^2 + bx + c$?</p> <p>How can you describe the graph of $f(x)=a(x-h)^2$?</p> <p>What are some of the characteristics of the graph</p>	<p>*Three-Minute Pause</p> <p>*Agree-Disagree Statement</p> <p>*Exit Ticket</p> <p>*Point of Most Significance</p> <p>*Turn and Talk</p> <p>*Think-Pair-Share</p> <p>*Whiteboarding</p>	<p>*Free Response problems that include Priority Standards from previous chapters, along with a focus on graphing, writing, and using quadratic functions in standard form, vertex form, and intercept form</p> <p>*Finding the minimum and maximum values of quadratic functions</p> <p>*Identifying even and odd functions</p>

	<p>of $f(x) = a(x-p)(x-q)$? What is the focus of a parabola? How can you compare the growth rates of linear, exponential, and quadratic functions?</p>		<p>algebraically and graphically *Using the intercept form of quadratic functions to find the zeros of the functions *Defining a parabola as the set of all points (x,y) in a plane that are equidistant from a fixed point called the focus and a fixed line called the directrix; and writing equations of parabolas with a vertical axis of symmetry or with a horizontal axis of symmetry.</p>
<p>4. Solving Quadratic Equations</p>	<p>How can you multiply and divide square roots? How can you use a graph to solve a quadratic equation in one variable? How can you determine the number of solutions of a quadratic equation of the form $ax^2 + c = 0$? How can you use “completing the square” to solve a quadratic equation? How can you derive a formula that can be used to write the solutions of any quadratic equation in standard form? What are the subsets of the sets of complex numbers? How can you determine whether a quadratic equation has real solutions or imaginary solutions? How can you solve a system of two equations when one is linear and the other is quadratic? How can you solve a</p>	<p>*Writing Prompt *Response Cards *Pass the Problem *Paired Verbal Fluency *No-Hands Questioning *I Used to Think...But Now I Know... *Wait Time *Selective Responses *Three-Minute Pause *Agree-Disagree Statement *Exit Ticket *Point of Most Significance *Turn and Talk *Think-Pair-Share *Whiteboarding</p>	<p>*Free Response problems that include Priority Standards from previous chapters, along with a focus on simplifying radical expressions and performing addition, subtraction, and multiplication with radicals *Solving quadratic equations with real and complex solutions by graphing, using square roots, completing the square, and the Quadratic Formula *Interpreting the discriminant to determine the number of real solutions of quadratic equations; adding, subtracting, and multiplying complex numbers *Solving systems of nonlinear equations in two variables by</p>

	quadratic inequality?		graphing, substitution, and elimination; graphing quadratic inequalities in two variables in the coordinate plane; and solving quadratic inequalities in one variable algebraically and graphically
5. Probability	<p>How can you list the possible outcomes in the sample space of an experiment?</p> <p>How can you determine whether two events are independent or dependent?</p> <p>How can you construct and interpret a two-way table?</p> <p>How can you find probabilities of disjoint and overlapping events?</p> <p>How can a tree diagram help you visualize the number of ways in which two or more events can occur?</p> <p>How can you determine the frequency of each outcome of an event?</p>	<ul style="list-style-type: none"> *Predict, Explain, Observe *Visitor Explanation *Partner Speaks *Writing Prompt *Response Cards *Pass the Problem *Paired Verbal Fluency *No-Hands Questioning *I Used to Think...But Now I Know... *Wait Time *Selective Responses *Three-Minute Pause *Agree-Disagree Statement *Exit Ticket *Point of Most Significance *Turn and Talk *Think-Pair-Share *Whiteboarding 	<ul style="list-style-type: none"> *Free Response problems that include Priority Standards from previous chapters, along with a focus on finding theoretical and experimental probabilities *Finding and comparing probabilities of independent and dependent events; finding conditional probabilities when events are dependent *Finding relative and conditional relative frequencies and using conditional relative frequencies to find conditional probabilities; finding probabilities of compound events *Using the formulas for the number of permutations and number of combinations; and constructing and interpreting probability distributions and binomial distributions
6. Relationships Within Triangles	<p>How can you prove a mathematical statement?</p> <p>What conjectures can you make about a point on the perpendicular bisector of a segment and a point on the</p>	<ul style="list-style-type: none"> *Learning Goals Inventory *Muddiest Point *Look Back *Predict, Explain, Observe *Visitor Explanation *Partner Speaks 	<ul style="list-style-type: none"> *Free Response problems that include Priority Standards from previous chapters, along with a focus on writing two-column, paragraph,

	<p>bisector of an angle? What conjectures can you make about the perpendicular bisectors and the angle bisectors of a triangle? What conjectures can you make about the medians and altitudes of a triangle? How are the midsegments of a triangle related to the sides of the triangle? How are the sides related to the angles of a triangle? How are any two sides of a triangle related to the third side? If two sides of one triangle are congruent to two sides of another triangle, what can you say about the third sides of the triangles?</p>	<ul style="list-style-type: none"> *Writing Prompt *Response Cards *Pass the Problem *Paired Verbal Fluency *No-Hands Questioning *I Used to Think...But Now I Know... *Wait Time *Selective Responses *Three-Minute Pause *Agree-Disagree Statement *Exit Ticket *Point of Most Significance *Turn and Talk *Think-Pair-Share *Whiteboarding 	<p>flowchart, and coordinate proofs to prove geometric relationships *Using perpendicular bisectors and angle bisectors to find measures *Using and finding the circumcenters, incenters, centroids, and orthocenters of triangles *Using the Triangle Midsegment Theorem to find distances; proving geometric relationships using indirect proofs *Relating sides and angles of a triangle and using the Triangle Inequality Theorem to find possible side lengths; and using the Hinge Theorem to compare angle measures and side lengths between two triangles.</p>
<p>7. Quadrilaterals and Other Polygons</p>	<p>What is the sum of the measures of the interior angles of a polygon? What are the properties of parallelograms? How can you prove that a quadrilateral is a parallelogram? What are the properties of the diagonals of rectangles, rhombuses, and squares? What are some properties of trapezoids and kites?</p>	<ul style="list-style-type: none"> *Learning Goals Inventory *Muddiest Point *Look Back *Predict, Explain, Observe *Visitor Explanation *Partner Speaks *Writing Prompt *Response Cards *Pass the Problem *Paired Verbal Fluency *No-Hands Questioning I Used to Think...But Now I Know... *Wait Time *Selective Responses *Three-Minute Pause *Agree-Disagree Statement *Exit Ticket *Point of Most Significance *Turn and Talk 	<p>*Free Response problems that include Priority Standards from previous chapters, along with a focus on finding and using the interior and exterior angle measures of polygons; *Using properties of parallelograms, rhombuses, rectangles, squares, trapezoids, and kites; proving that quadrilaterals with certain properties are parallelograms *Using coordinate geometry to identify special types of parallelograms; and</p>

		<ul style="list-style-type: none"> *Think-Pair-Share *Whiteboarding 	identifying quadrilaterals using the most specific name based on given information
8. Similarity	<p>What does it mean to dilate a figure?</p> <p>When a figure is translated, rotated, or dilated in the plane, is the image always similar to the original figure?</p> <p>How are similar polygons related?</p> <p>What can you conclude about two triangles when you know that two pairs of corresponding angles are congruent?</p> <p>What are two ways to use corresponding sides of two triangles to determine that the triangles are similar?</p> <p>What proportionality relationships exist in a triangle intersected by an angle bisector or by a line parallel to one of the sides?</p>	<ul style="list-style-type: none"> *Think Alouds *3-2-1 *Fact-First Questioning *Learning Goals Inventory *Muddiest Point *Look Back *Predict, Explain, Observe *Visitor Explanation *Partner Speaks *Writing Prompt *Response Cards *Pass the Problem *Paired Verbal Fluency *No-Hands Questioning *I Used to Think...But Now I Know... *Wait Time *Selective Responses *Three-Minute Pause *Agree-Disagree Statement *Exit Ticket Point of Most Significance Turn and Talk Think-Pair-Share Whiteboarding 	<ul style="list-style-type: none"> *Free Response problems that include Priority Standards from previous chapters, along with a focus on identifying and performing dilations *Describing and performing similarity transformations *Finding perimeters and areas of similar polygons using proportions; using the AA, SSS, and SAS Similarity Theorems to prove two triangles are similar, and using proportionality theorems to find lengths of segments
9. Right Triangles and Trigonometry	<p>How can you prove the Pythagorean Theorem?</p> <p>What is the relationship among the side lengths of a 45-45-90 triangle?</p> <p>What is the relationship among the side lengths of a 30-60-90 triangle?</p> <p>How are altitudes and the geometric mean of right triangles related?</p> <p>How is a right triangle used to find the tangent of an acute angle?</p> <p>Is there a unique right triangle that must be used?</p> <p>How is a right triangle used</p>	<ul style="list-style-type: none"> *Which One Doesn't Belong? *Give Me Five *Think Alouds *3-2-1 *Fact-First Questioning *Which One Doesn't Belong? *Give Me Five *Learning Goals Inventory *Muddiest Point *Look Back *Predict, Explain, Observe *Visitor Explanation *Partner Speaks *Writing Prompt *Response Cards *Pass the Problem *Paired Verbal Fluency 	<ul style="list-style-type: none"> *Free Response problems that include Priority Standards from previous chapters, along with a focus on the Pythagorean Theorem and its converse *Finding side lengths in special right triangles; using geometric means to write proportions of similar right triangles *Using tangent, sine, and cosine ratios to find the length of leg or a hypotenuse of a right triangle; finding the sine and cosine of angle

	<p>to find the sine, cosine, and tangent of an acute angle? Is there a unique right triangle that must be used? When you know the lengths of the sides of a right triangle, how can you find the measures of the two acute angles?</p>	<p>*No-Hands Questioning 8I Used to Think...But Now I Know... Wait Time Selective Responses Three-Minute Pause Agree-Disagree Statement Exit Ticket Point of Most Significance Turn and Talk Think-Pair-Share Whiteboarding</p>	<p>measures in special right triangles *Using trigonometric identities involving sine and cosine to find trigonometric values; using inverse trigonometric ratios to find angle measure of right triangles, and using the *Pythagorean Theorem and inverse trigonometric ratios</p>
10. Circles	<p>What are the definitions of the lines and segments that intersect a circle? How are circular arcs measured? What are two ways to determine when a chord is the diameter of a circle? How are the angles of an inscribed quadrilateral related to each other? When a chord intersects a tangent line or another chord, what relationships exist among the angles and arcs formed? What relationships exist among the segments formed by two intersecting chords or among segments of two secants that intersect outside a circle? What is the equation of a circle with center (h,k) and radius r in the coordinate plane?</p>	<p>*Agreement Circles *Always - Sometimes - Never True *Think Alouds *3-2-1 *Fact-First Questioning *Which One Doesn't Belong? *Give Me Five *Learning Goals Inventory *Muddiest Point *Look Back *Predict, Explain, Observe *Visitor Explanation *Partner Speaks *Writing Prompt *Response Cards *Pass the Problem *Paired Verbal Fluency *No-Hands Questioning *I Used to Think...But Now I Know... *Wait Time *Selective Responses *Three-Minute Pause *Agree-Disagree Statement *Exit Ticket *Point of Most Significance *Turn and Talk *Think-Pair-Share *Whiteboarding</p>	<p>*Free Response problems that include Priority Standards from previous chapters, along with a focus on identifying radii, chords, diameters, secants, and tangents that intersect circles *Using chords of circles to find lengths and arc measures in circles; using inscribed angles and circumscribed angles to find angle and arc measures in circles *Using inscribed polygons to find angle measures in polygons; using segments of chords, tangents, and secants of circles to find lengths of line segments; writing and graphing equations of circles in the coordinate plane; and solving nonlinear systems involving equations of circles and lines</p>
11. Circumference, Area, and Volume	<p>How can you find the length of a circular arc? How can you find the area</p>	<p>*Opposing Views *Example/Non-Example (student generated)</p>	<p>*Free Response problems that include Priority Standards from previous</p>

	<p>of a sector in a circle? How can you find the area of a regular polygon? How can you find the volume of a prism or cylinder that is not a right prism or right cylinder? How can you find the volume of a pyramid? How can you find the surface area and the volume of a cone? How can you find the surface area and the volume of a sphere?</p>	<ul style="list-style-type: none"> *Agreement Circles *Always - Sometimes - Never True *Think Alouds *3-2-1 *Fact-First Questioning *Which One Doesn't Belong? *Give Me Five *Learning Goals Inventory *Muddiest Point *Look Back *Predict, Explain, Observe *Visitor Explanation *Partner Speaks *Writing Prompt *Response Cards *Pass the Problem *Paired Verbal Fluency *No-Hands Questioning *I Used to Think...But Now I Know... *Wait Time *Selective Responses *Three-Minute Pause *Agree-Disagree Statement *Exit Ticket *Point of Most Significance *Turn and Talk *Think-Pair-Share *Whiteboarding 	<p>chapters, along with a focus on using the formulas for circumference and arc length to find measures in circles *Measuring angles in radians and converting between degree and radian measures; finding and using areas of sectors as fractional parts of the areas of circles *Finding areas of rhombuses, kites, and regular polygons; classifying solids and named polyhedra *Finding and using volumes of prisms, cylinders, pyramids, cones, spheres, and composite solids; and finding surface areas of right cones and spheres</p>
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ESSENTIAL STANDARDS:

NUMBER and QUANTITY

The Complex Number System

N-CN-1 Know there is a complex number such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.

N-CN-2 Use the relation $i^2 = -1$, and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.

N-CN-7 Solve quadratic equations with real coefficients that have complex solutions.

ALGEBRA

Seeing Structure in Expressions

A-SSE-1a Interpret parts of an expression, such as terms, factors, and coefficients.

A-SSE-2 Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$

$(y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.

A-SSE-3a Factor a quadratic expression to reveal the zeros of the function it defines.

A-SSE-3b Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.

Perform Arithmetic Operations on Polynomials

A-APR-1 Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

Create Equations that Describe Numbers or Relationships

A-CED-4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. [Include formulas involving quadratic terms.]

Solve Equations and Inequalities in One Variable

A-REI-4 Solve quadratic equations in one variable.

b. Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula, and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a + bi$ for real numbers a and b .

A-REI-7 Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.

FUNCTIONS

Interpret functions that arise in applications in terms of the context.

F-IF-4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.

F-IF-5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.

F-IF-6 Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.

Analyze functions using different representations.

F-IF-7a Graph linear and quadratic functions and show intercepts, maxima, and minima.

F-IF 8a Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.

Build new functions from existing functions.

F-BF-3 Identify the effect on the graph of replacing $y = f(x)$ by $y = f(x) + k$, $y = kf(x)$, $y = f(kx)$, and $y = f(x+k)$ for specific values of k (both positive and negative); find the value of k , given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

Interpret expressions for functions in terms of the situation they model.

F-LE-3 Apply quadratic functions to physical problems, such as the motion of an object under the force of gravity.

GEOMETRY

Prove Geometric Theorems

G-CO-10 Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180° ; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.

Prove theorems involving similarity.

G-SRT-4 Prove theorems about triangles. Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.

G-SRT-5 Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

Define trigonometric ratios and solve problems involving right triangles.

G-SRT-6 Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.

G-SRT-8 Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

Understand and apply theorems about circles.

G-C-2 Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.

Translate between the geometric description and the equation for a conic section.

G-GPE-1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.

Explain Volume Formulas and Use Them to Solve Problems

G-GMD-3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.

G-GMD-5 Know that the effect of a scale factor k greater than zero on length, area, and volume is to multiply each by k , k^2 , k^3 and, respectively; determine length, area, and volume measures using scale factors

G-GMD-6 Verify experimentally that in a triangle, angles opposite longer sides are larger, sides opposite larger angles are longer, and the sum of any two side lengths is greater than the remaining side length; apply these relationships to solve real-world and mathematical problems.

STATISTICS and PROBABILITY

Understand independence and conditional probability and use them to interpret data.

S-CP-1 Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).

S-CP-2 Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities and use this characterization to determine if they are independent.

S-CP-3 Understand the conditional probability of A given B as the $P(A \text{ and } B) / P(B)$, and interpret independence of A and B , as saying the conditional probability of A given B , is the same as the probability given A , and the conditional probability of B given A , is the same as the probability of B .

S-CP-4 Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for

other subjects and compare the results.

S-CP-5 Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.

Use the rules of probability to compute probabilities of compound events in a uniform probability model.

S-CP-6 Find the conditional probability of A given B as the fraction of 's outcomes that also belong to and interpret the answer in terms of the model.

S-CP-7 Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.

S-CP-8 Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B|A) = P(B)P(A|B)$ and interpret the answer in terms of the model.

S-CP-9 Use permutations and combinations to compute probabilities of compound events and solve problems.

RELEVANT STANDARDS AND FRAMEWORKS. CONTENT/PROGRAM SPECIFIC STANDARDS:

Link to Common Core Standards (if applicable):

Educational standards describe what students should know and be able to do in each subject in each grade. In California, the State Board of Education decides on the standards for all students, from kindergarten through high school.

<https://www.cde.ca.gov/be/st/ss/documents/ccssmathstandardaug2013.pdf>

Link to Framework (if applicable):

Curriculum frameworks provide guidance for implementing the content standards adopted by the State Board of Education (SBE). Frameworks are developed by the Instructional Quality Commission, formerly known as the Curriculum Development and Supplemental Materials Commission, which also reviews and recommends textbooks and other instructional materials to be adopted by the SBE.

<https://www.cde.ca.gov/ci/ma/cf/documents/mathfwmathematics2jl.pdf>

Link to Subject Area Content Standards (if applicable):

Content standards were designed to encourage the highest achievement of every student, by defining the knowledge, concepts, and skills that students should acquire at each grade level.

Link to Program Content Area Standards (if applicable):

Program Content Area Standards applies to programs such as International Baccalaureate, Advanced Placement, Career and Technical Education, etc.

TEXTBOOKS AND RESOURCE MATERIALS:

Textbooks

Board Approved	Pilot Completion Date (If applicable)	Textbook Title	Author(s)	Publisher	Edition	Date
<i>Yes</i>		<i>Big Ideas Math Integrated Math II</i>	Ron Larson and Laurie Boswell	Cengage/National Geographic/ Big Ideas Learning		<i>1/1/2016</i>

Other Resource Materials

Supplemental Materials

Board approved supplemental materials (Including but not limited to: Film Clips, Digital Resources, Supplemental texts, DVDs, Programs (Pebble Creek, DBQ, etc.):