CPM Integrated Math 2 Pacing Guide

This document is an estimation of pacing for the school year. The teacher will have to make adjustments based on student needs and skill levels. It is our expectation that we will get most students to standard before moving on to the next section, so flexibility is required with this document. Again, these are only estimated completion dates!

On page 2, there is an estimate of the number of days each topic will take. This estimation does not include days for local and state assessments (including but not limited to NWEA, finals, CAASPP, etc). Plus standards will or will not be covered based on teacher discretion as they are enrichment standards rather than core standards. As always, it is our goal to get as much material covered in the school year with student comprehension, so additional topics can be covered if a class is excelling past this timeline.

Overview of Standards:

I. Number and Quantity
   - A. The Real Number System
     1. Extend the properties of exponents to rational exponents.
     2. Use properties of rational and irrational numbers.
   - B. The Complex Number Systems
     1. Perform arithmetic operations with complex numbers.
     2. Use complex numbers in polynomial identities and equations.

II. Algebra
   - A. Seeing Structure in Expressions
     1. Interpret the structure of expressions.
     2. Write expressions in equivalent forms to solve problems.
   - B. Arithmetic with Polynomials and Rational Expressions
     1. Perform arithmetic operations on polynomials.
   - C. Creating Equations
     1. Create equations that describe numbers or relationships.
   - D. Reasoning with Equations and Inequalities
     1. Solve equations and inequalities in one variable.
     2. Solve systems of equations.

III. Functions
   - A. Interpreting Functions
     1. Interpret functions that arise in applications in terms of the context.
     2. Analyze functions using different representations.
   - B. Building Functions
     1. Build a function that models a relationship between two quantities.
     2. Build new functions from existing functions.
   - C. Linear, Quadratic, and Exponential Models
     1. Construct and compare linear, quadratic, and exponential models and solve problems.
     2. Interpret expressions for functions in terms of the situation they model.
   - D. Trigonometric Functions
     1. Prove and apply trigonometric identities.

IV. Geometry
   - A. Congruence
     1. Prove geometric theorems.
   - B. Similarity, Right Triangles, and Trigonometry
     1. Understand similarity in terms of similarity transformations.
     2. Prove theorems involving similarity.
     3. Define trigonometric ratios and solve problems involving right triangles.
   - C. Circles
     1. Understand and apply theorems about circles.

2. Find arc lengths and areas of sectors of circles.

D. Expressing Geometric Properties with Equations
   1. Translate between the geometric description and the equation for a conic section.
   2. Use coordinates to prove simple geometric theorems algebraically.

E. Geometric Measurement and Dimension
   1. Explain volume formulas and use them to solve problems.

V. Statistics and Probability

A. Conditional Probability and the Rules of Probability
   1. Understand independence and conditional probability and use them to interpret data.
   2. Use the rules of probability to compute probabilities of compound events in a uniform probability model.

B. Using Probability to Make Decisions
   1. Use probability to evaluate outcomes of decisions.

VI. Mathematical Practices
   1. Make sense of problems and persevere in solving them.
   2. Reason abstractly and quantitatively.
   3. Construct viable arguments and critique the reasoning of others.
   4. Model with mathematics.
   5. Use appropriate tools strategically.
   6. Attend to precision.
   7. Look for and make use of structure.
   8. Look for and express regularity in repeated reasoning.

Estimated Timeline of Topics

Topic	Standards Covered	Estimated Number of Days	Estimated Start Month
Exploring Algebraic and Geometric	F-BF.1a, A-SSE.1a, A-SSE.3a, A-APR.1, F-IF.4, G-CO.9, G-CO.10, G-GMD.6	18	August
Justification and Similarity	G-SRT.5, G-CO.9, G-SRT.1a, G-SRT.1b, G-SRT.2, G-SRT.3, G-SRT.5	20	September
Probability and Trigonometry	S-CP.1, S-CP.7, S-MD.6+, G-SRT.6, G-SRT.8	18	November
Factoring and More Trigonometry	A-SSE.3a, A-SSE.2, A-APR.1, G-SRT.6, G-SRT.7, G-SRT.8	16	December
Quadratic Functions	F-IF.4, F-IF.5, F-IF.7a, A-CED.1, F-IF.9, F-BF.1a, A-SSE.3a, A-CED.2, A-REI.4a, F-IF.8a, A-REI.4b, A-SSE.1a, A-SSE.1b, A-SSE.2, A-SSE.3b, N-CN.1, N-CN.2, N-CN.7, N-CN.8+, A-APR.1	20	January
More Right Triangles	G-SRT.4, G-SRT.8.1CA, G-SRT.8, F-TF.8, G-SRT.6, N-RN.1, N-RN.2, A-SSE.3c, F-IF.8b, G-SRT.5, A-REI.4a, N-RN.3, N-CN.1, N-CN.8+, N-CN.9+, A-CED.2, F-IF.4, F-IF.5, F-BF.1a, S-CP.5, S-MD.7+	17	February

Proof and Conditional Probability	G-CO.11, G-SRT.5, G-CO.9, G-CO.10, G-SRT.4, S-CP.3, S-CP.4, S-CP.5, S-CP.6, S-CP.7, S-CP.8+, S-MD.7+	18	March
Polygons and Circles	G-CO.10, G-SRT.5, G-C.3, G-SRT.8, G-GMD.5CA, G-GMD.1, G-C.1, G-C.5	17	April
Modeling and Functions	A-CED.2, F-IF.4, F-IF.5, F-IF.7a, F-BF.3, F-IF.8a, A-SSE.1a, A-SSE.3a, A-SSE.3b, A-CED.2, F-IF.7b, A-CED.1, F-BF.1a, A-REI.7, F-IF.6, F-LE.3, F-BF.1b, F-BF.4a	20	May