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<th>Unit 1</th>
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<th>*Unit 10</th>
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### Matrices
- MGSE-12.N.VM.6: (Use matrices for data)
  - MGSE-12.N.VM.7: (Multiply matrices)
  - MGSE-12.N.VM.8: (Add, subtract & multiply matrices)
  - MGSE-12.N.VM.9: (Properties & multiplicative matrices)
  - MGSE-12.N.VM.10: (Zero & identity matrices)
  - MGSE-12.N.VM.12: (2x2 matrices & transformations)
- MGSE-12.A.REI.8: (Systems & matrices)
- MGSE-12.A.REI.9: (Inverse of a matrix)

### Conics
- MGSE-12.G.GPE.2: (Derive the equation of a parabola)
- MGSE-12.G.GPE.3: (Derive the equations of ellipses & hyperbolas)
- MGSE-12.A.REI.7: (Solve a system of linear & quadratic equations)

### Introduction to Trigonometric Functions
- MGSE-12.F.TF.1: (Radian measures)
- MGSE-12.F.TF.2: (Unit circle)
- MGSE-12.F.TF.5: (Periodic phenomena)
- MGSE-12.F.TF.8: (Pythagorean identity)

### Trigonometric Functions
- MGSE-12.F.TF.4: (Inverse functions)
- MGSE-12.F.TF.4d: (Invertible functions)
- MGSE-12.F.TF.3: (Sine, cosine & tangent)
- MGSE-12.F.TF.4: (Symmetry & periodicity)
- MGSE-12.F.TF.6: (Restricted domain)
- MGSE-12.F.TF.7: (Inverse functions & modeling)

### Trigonometric Identities
- MGSE-12.F.TF.9: (Prove addition, subtraction, double and half-angle formulas)
- MGSE-12.G.SRT.9: (Derive the area of a triangle)
- MGSE-12.G.SRT.1: (Prove Laws of Sines & Cosines)

### Trigonometric Equations
- MGSE-12.N.CN.3: (Conjugates of complex numbers)
- MGSE-12.N.CN.4: (Complex #’s on complex planes)
- MGSE-12.N.CN.5: (Addition, subtraction, multiplication & conjugation of complex #’s geometrically)
- MGSE-12.G.SRT.1: (Apply Laws of Sines & Cosines)

### Vectors
- MGSE-12.F.TF.4: (Graph trig. functions)
- MGSE-12.F.TF.5: (Graph trig. functions)
- MGSE-12.F.TF.8: (Pythagorean identity)

### Probability
- MGSE-12.S.CP.9: (Graph functions)
- MGSE-12.S.CP.9: (Graph functions)

### Inferences and Conclusions from Data
- MGSE-12.S.ID.4: (Shape & data distribution)
- MGSE-12.S.ID.4: (Fit to a normal distribution)

### Polar & Parametric Structure
- MGSE-12.S.CP.9: (Graph functions)
- MGSE-12.S.CP.9: (Graph functions)

### Sequences & Series Review
- MGSE-12.S.CP.9: (Graph functions)
- MGSE-12.S.CP.9: (Graph functions)

**Notes:**
- These units were written to build upon concepts from prior units, so later units contain tasks that depend upon the concepts addressed in earlier units.
- All units will include the Mathematical Practices and indicate skills to maintain proficiency and understanding.

**Review:** All standards by differentiating for student needs.
NOTE: Mathematical standards are interwoven and should be addressed throughout the year in as many different units and topics as possible in order to stress the natural connections that exist among mathematical topics. *denotes enrichment standards in preparation for AP Calculus

**Grades 9-12 Key: Algebra Strand:** SSE = Seeing Structure in Expressions, APR = Arithmetic with Polynomial and Rational Expressions, CED = Creating Equations, REI = Reasoning with Equations and Inequalities

**Functions Strand:** IF = Interpreting Functions, LE = Linear and Exponential Models, BF = Building Functions, TF = Trigonometric Functions

**Geometry Strand:** CO = Congruence, SRT = Similarity, Right Triangles, and Trigonometry, C = Circles, GPE = Expressing Geometric Properties with Equations, GMD = Geometric Measurement and Dimension, MG = Modeling with Geometry

**Statistics and Probability Strand:** ID = Interpreting Categorical and Quantitative Data, IC = Making Inferences and Justifying Conclusions, CP = Conditional Probability and the Rules of Probability, MD = Using Probability to Make Decisions

CSE=Cobb Standards of Excellence