



Parma High School

Math II

Scope and Sequence

<p>Mathematical Practices</p> <ol style="list-style-type: none"> 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. 		<p>Math II Focus Areas</p>		<p>Major Domains</p> <p>The major domains in High School Math are:</p> <ol style="list-style-type: none"> 1. Number and Quantity 2. Algebra 3. Functions 4. Modeling 5. Geometry 6. Statistics and Probability 	
Weeks	Unit Title	Learning Targets	Vocabulary	Domain/Standards	Resources
Late August –	Reasoning and Proof	Students will be able to use reasoning to determine the	Construction, compass, straightedge, congruent,	G.CO.9 ,12	MVP Ch. 1

Early Septemb er		different facts about a statement. Students will also be using this type of reasoning to construct some basic mathematical proofs using postulates and theorems.	inductive reasoning, conjecture, counterexample, perpendicular lines, perpendicular bisector, conditional, hypothesis, conclusion, truth value, negation, convers, inverse, contrapositive, biconditional, deductive reasoning, addition property, subtraction property, multiplication property, division property, reflexive property, symmetric property, transitive property, substitution property, proof, two-column proof, theorem, paragraph proof,		
Early Sept – end of sept	Proving theorem about lines and angles	Students will be able to define parallel lines. They will be able to identify all congruent and supplementary angles created by parallel lines and write up a two-column proof to prove lines parallel. Students will also be able to identify angle measure by knowing the triangle angle sum theorem and the exterior angle sum theorem.	Vertical angles, linear pair, parallel lines, perpendicular, alternate interior angles, alternate exterior angles, consecutive interior angles, congruent, supplementary, bisector, transversal, auxiliary	G.CO.9 , 10, 12, 13	
End of Sept. To mid Oct.	Congruent Triangles	Students will be able to prove congruent triangles using congruent triangle theorems. They will be able to write out a two-column proof to identify	Isosceles triangle, legs, corresponding parts.	G.SRT.5 G.CO.5, 6, 7, 8, 10, 12, 13	

		<p>congruent triangles and identify all congruent parts of congruent triangles.</p> <p>Students will be able to identify congruent angles by vertical angles or parallel postulates.</p>			
Mid Oct. To mid of Nov.	Proving theorems about triangles	<p>Students will be able to use characteristics of triangles to solve for missing information.</p> <p>Students will be able to prove facts about triangles using theorems like SSS, SAS, ASA, and HL congruency theorems. They will be able to identify corresponding parts of congruent triangles.</p>	Equiangular, consecutive, diagonals, slope	G.CO.9, 10, 12 G.C.3 G.SRT.5	
Mid Nov to end Nov.	Proving Theorems about quadrilaterals	<p>Students will be able to determine the name of a shape based on its characteristics. They will also be able to use those characteristics to solve for missing information in a quadrilateral.</p>	Rhombus, rectangles, opposite, isosceles trapezoid, trapezoid, square, quadrilateral	G.CO.9, 10, 11 G.SRT.5	
Early Dec- Mid Jan.	Similarity	<p>Students will be able to identify similar polynomials. They will use proportions to solve for missing side lengths or values.</p>	Similarity, proportional, ratio	N.Q.2 G.SRT.1.a, 1.b, 2, 3, 4, 5 G.CO.12 G.GPE.5	
Mid Jan – Mid Feb	Right Triangles and Trigonometry	<p>Students will use Pythagorean theorem, sine ratios, cosine ratios, and tangent ratios, to</p>	Trigonometry, Pythagorean theorem, sine, cosine, tangent.	G.SRT.4, 6, 7, 8 A.SSE.1.b G.CO.13	

		solve for missing lengths of a right triangle.			
Mid Feb – Early March	Circles			G.C.1, 2, 3, 5	
Early March to Mid- March	Surface Area and Volume			G.GMD.1, 2, 3 N.Q.2 G.MG.1	
Mid- March- to end of March	Properties of Exponents with Rational Exponents			N.RN.1, 2, 3	
End of March to end of May	Polynomials and Factoring			A.APR.1 A.SSE.1.a, 1.b, 2	
If time permits	Quadratic Functions			A.CED.1, 2, 4 F.IF.4, 5, 6, 7, 7.a, 8.a, 9 F.BF.1, 1.a, 1.b, 3 N.Q.2 S.ID.6.a, 6.b A.REI.1, 4, 4.a, 4.b, 7 A.SSE.1.b N.CN.1, 2, 3, 7 F.LE.3 G.GPE.1, 2, 4	
If time permits	Probability			S.CP.1, 2, 3, 4, 5, 6, 7, 9	

				S.MD.6, 7	
If time permits	Other Types of Function			A.SSE.1.b, 3.c F.IF.4, 6, 7.b, 7.e, 8, 8.b A.CED. 2 F.BF.1.b, 3, 4.a	
If time permits	Sequences and Series			F.BF.1.a A.SSE.4	