

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
PRECALCULUS

Precalculus Curriculum Guide

Pacing Guide Precalculus is a full year course that meets on a rotating basis for three (3) 55-minute blocks and one (1) 40-minute block for every five (5) day cycle.	Unit 1 (Chapter P): Prerequisites for Trigonometry	2-3 weeks
	Unit 2 (Chapter 1): Trigonometric Functions	9 weeks
	Unit 3 (Chapter 2): Analytic Trigonometry	3 weeks
	Unit 4 (Chapter 3): Additional topics in Trigonometry	2 weeks
	Unit 5 (Chapter 4): Imaginary and Complex Numbers	3 weeks
	Unit 6 (Chapter 5): Exponents and Logarithms	5 weeks
	Unit 7 (Chapter 13): Sequences and Series	3 weeks
	Unit 8 (Chapter 16): Probability	4 weeks

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

<p>21st Century Skills Standards: 9.1 Personal Finance Literacy</p> <p>9.2 Career Awareness</p>	<p>9.1.12.D.3: Summarize how investing builds wealth and assists in meeting long-and short-term financial goals. 9.1.12.D.5: Justify the use of savings and investment options to meet targeted goals.</p> <p>9.2.12.C.1 Review career goals and determine steps necessary for attainment. 9.2.12.C.4: Analyze how economic conditions and social changes influence employment trends and future education.</p>
<p>Technology Standards</p>	<p>8.1.12.A.4: Construct a spreadsheet, enter data, and use mathematical or logical functions to manipulate data, generate charts and graphs, and interpret the results.</p>
<p>Interdisciplinary Connections</p>	<p>SCIENCE HS-LS2-1. Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. ENGLISH LANGUAGE ARTS WHST.9-12.9 Draw evidence from informational texts to support analysis, reflection, and research.</p>

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
PRECALCULUS

<p>NJSLS Mathematical Practices – These practices are demonstrated throughout the curriculum.</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>NJSLS Career Ready Practices – These practices are demonstrated throughout the curriculum</p>	<p>CRP2. Apply appropriate academic and technical skills. CRP4. Communicate clearly and effectively and with reason. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP9. Model integrity, ethical leadership and effective management. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.</p>

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

Differentiation/Accommodations/Modifications

Note: Each district should review the various strategies noted below and determine which are applicable for their population within varied grade levels and languages and make edits where needed.

Gifted and Talented	English Language Learners	Students with Disabilities	Students at Risk of School Failure
<p><i>(content, process, product and learning environment)</i></p> <p>Extension Activities:</p> <ul style="list-style-type: none"> • Conduct research and provide presentation of mathematical topics. • Design surveys to generate and analyze data to be used in discussion. • Use of higher level questioning techniques. • Provide assessments at a higher level of thinking. 	<p>Modifications for Classroom:</p> <p>Modifications for Homework/Assignments</p> <ul style="list-style-type: none"> • Modified assignments. • Extended time for assignment completion as needed. • Use graphing calculator. • Highlight formulas. 	<p><i>(appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team)</i></p> <p>Modifications for Classroom:</p> <ul style="list-style-type: none"> • Ask students to restate information, directions, and assignments. • Repetition and practice. • Model skills / techniques to be mastered. • Extended time to complete class work. • Provide copy of classnotes. • Preferential seating to be mutually determined by the student and teacher. • Students may request books online, on tape/CD, as available and appropriate. Assign peer helper in the class setting. • Provide regular parent / school communication • Provide oral reminders and check student work during independent 	<p>Modifications for Classroom:</p> <ul style="list-style-type: none"> • Ask students to restate information, directions, and assignments. • Repetition and practice. • Model skills / techniques to be mastered. • Extended time to complete class work. • Provide copy of classnotes. • Preferential seating to be mutually determined by the student and teacher. • Students may request books online, on tape/CD, as available and appropriate. • Assign peer helper in the class setting. • Provide oral reminders and check student work during independent work time. • Assist student with long and short term planning of assignments • Provide regular parent / school communication. • Assign peer helper in the class

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

		<p>work time.</p> <ul style="list-style-type: none"> • Assist student with long and short term planning of assignments <p>Modifications for Homework</p> <ul style="list-style-type: none"> • Extended time to complete assignments. • Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases. • Provide the student with clearly stated (written) expectations and grading criteria for assignments. <p>Modification for Assessments</p> <ul style="list-style-type: none"> • Extended time on classroom tests and quizzes. • Student may take / complete tests in an alternate setting as needed. • Restate, reread, and clarify directions/questions. • Distribute study guide for classroom tests. • Establish procedures for accommodations / modifications for assessments. 	<p>setting.</p> <ul style="list-style-type: none"> • Provide oral reminders and check student work during independent work time. • Assist student with long and short term planning of assignments <p>Modifications for Homework</p> <ul style="list-style-type: none"> • Extended time to complete assignments. • Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases. • Provide the student with clearly stated (written) expectations and grading criteria for assignments. <p>Modification for Assessments</p> <ul style="list-style-type: none"> • Extended time on classroom tests and quizzes. • Student may take / complete tests in an alternate setting as needed. • Restate, reread, and clarify directions/questions. • Distribute study guide for classroom tests. • Establish procedures for accommodations / modifications for assessments.
--	--	---	--

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter P			
Theme: Algebraic Operations			
Essential Questions: How will an algebra refresher help the student in trigonometry? What are the algebraic properties and how are they applied in trigonometry? How do you relate algebraic procedures and geometric concepts?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section P.1 Real Number System • Section P. 1 Evaluate absolute value • Section P.2 Solve 1st and 2nd degree equations 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to graph and perform operations with real numbers • Apply rules and properties of algebra • Graph and perform operations using absolute value 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSL MA 9-12 A-SSE.B.3A A-SSE.B.3C A-APR.A.1 Time Frame: 6 days Materials: Textbook: 1997 Trigonometry 4 th Edition Larson Hostetler ISBN-0-66941738-6 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter P			
Theme: Geometric Operations			
Essential Questions: How will an algebra refresher help the student in trigonometry? What are the algebraic properties and how are they applied in trigonometry? How do you relate algebraic procedures and geometric concepts?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section P.3 Graphs of Equations 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to plot coordinates and equations of lines • Use distance and midpoint formula in both graphs and word problems • Find equations of circles and graph the equation 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 G-GPE.B.5, B.4 Time Frame: 6 days Materials: Textbook: 1997 Trigonometry 4 th Edition Larson Hostetler ISBN-0-66941738-6 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

Content: Chapter 1				
Theme: Trigonometry				
Essential Questions: What are the six trigonometry ratios and their relationships to each other? What is the difference between degree measurement and radian measurements? How are the six trigonometric ratios of any angle found by using the unit circle?				
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section 1.1 Radian and Degree measure • Section 1.2 the Unit Circle • Section 1.3 Right Triangle Trigonometry • Section 1.4 Trigonometric Functions of any angle 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to convert from radians to degrees and degrees to radians • Find values of angles in both radian and degree measure • Use radians and degrees to find angle placement on unit circle • Evaluate positive and negative angles based on quadrants • Use SOHCAHTOA function to find ratios 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 G-SRT.C6, C7, C8	
			Time Frame: 21 days	
			Materials: Textbook: 1997 Trigonometry 4 th Edition Larson Hostetler ISBN-0-66941738-6 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 1			
Theme: Trigonometry			
Essential Questions: What does the graph of the trigonometric ratios look like? What does the graph of the inverse trigonometric ratios look like?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section 1.5 Graphs of Sine and Cosine • Section 1.6 Graphs of other trigonometric functions 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to graph both the positive and negative curve and apply transformations 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 G-MG.A Time Frame: 12 days Materials: Textbook: 1997 Trigonometry 4 th Edition Larson Hostetler ISBN-0-66941738-6 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 1				
Theme: Trigonometry				
Essential Questions: What are the trigonometric inverses? How are the trigonometric inverses used in real life scenarios?				
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section 1.7 Inverse Trigonometric Functions • Section 1.8 Applications and Models 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to use technology (graphing calculator) to find inverses • Apply inverses to word problems 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSL MA 9-12 G-MG.A	
			Time Frame: 12 days	
			Materials: Textbook: 1997 Trigonometry 4 th Edition Larson Hostetler ISBN-0-66941738-6 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 2			
Theme: Analytic Trigonometry			
Essential Questions: What is the relationship between Pythagorean theorem and the fundamental identities? How do you verify trigonometric identities? Can trigonometric equations be solved?			
<p>Content <i>(As a result of this learning segment, students will know...)</i></p> <ul style="list-style-type: none"> Section 2.1 Using Fundamental Identities Section 2.2 Verifying Trigonometric Identities 	<p>Skills <i>(As a result of this learning segment, students will be able to...)</i></p> <ul style="list-style-type: none"> Students will be able to use the Pythagorean identities to evaluate expressions Use the properties of multiplication, factoring and substitution to solve trig equations 	<p>Assessments (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	<p>Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 F-TF.B.7, C.8</p> <p>Time Frame: 15 days</p> <p>Materials: Textbook: 1997 Trigonometry 4th Edition Larson Hostetler ISBN-0-66941738-6</p> <p>Graphing calculators: Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils, white boards.</p>

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 3			
Theme: Additional topics in Trigonometry			
Essential Questions: How can you use the Law of Sines and Law of Cosines? What are the similarities and differences between Law of Sines and Law of Cosines?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section 3.1 Law of Sines • Section 3.2 Law of Cosines 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to apply the Law of Sine formula to solve triangles • Apply the Law of Cosines to solve triangles • Use Heron’s formula to solve triangles 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 G-SRT.D.10, D.11 Time Frame: 8 days Materials: Textbook: 1997 Trigonometry 4 th Edition Larson Hostetler ISBN-0-66941738-6 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 4				
Theme: Complex Numbers				
Essential Questions: How does the student perform mathematical operations with imaginary and complex numbers? How are real, imaginary, and complex numbers related? What are the properties of imaginary and complex numbers?				
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> • Section 4.1 Complex Numbers • Section 4.2 Complex Solutions of Equations • Section 4.3 Trigonometric Form of a complex number 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> • Students will be able to apply the properties of algebra to complex numbers • Use conjugates to determine roots 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 N-CN.B.4	
			Time Frame: 15 days	
			Materials: Textbook: 1997 Trigonometry 4 th Edition Larson Hostetler ISBN-0-66941738-6 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 5			
Theme: Exponential and Logarithmic Functions			
Essential Questions: What is the difference between exponents that are whole numbers and exponents that are fractions? What are the different properties of logarithms and how are they applied? What are the properties of imaginary and complex numbers?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section 5.1 Exponential functions and their graphs • Section 5.2 Logarithmic functions and their graphs • Section 5.3 Properties of Logarithms 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to perform the laws of exponents • Will be able to perform the laws of logarithms • Will be able to evaluate logarithmic decimals 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 F-BF.B.5 F-LE.A.4 Time Frame: 10 days Materials: Textbook: 1997 Trigonometry 4 th Edition Larson Hostetler ISBN-0-66941738-6 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 5			
Theme: Exponential and Logarithmic Functions			
Essential Questions: What is the difference between exponents that are whole numbers and exponents that are fractions? What are the different properties of logarithms and how are they applied? What are the properties of imaginary and complex numbers?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section 5.4 Exponential and Logarithmic equations • Section 5.5 Exponential and Logarithmic Models (Growth/Decay) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to rewrite logarithms as separate pieces and then as a single quantity • Solve exponential equations • Solve “e” logarithms • Solve exponential equations by factoring • Graph and solve exponential growth and decay equations 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 F-BF.B.5 F-LE.A.4 Time Frame: 15 days Materials: Textbook: 1997 Trigonometry 4 th Edition Larson Hostetler ISBN-0-66941738-6 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 13				
Theme: Sequences and Series				
Essential Questions: What is the difference between a sequence and a series? How do arithmetic and geometric sequences differ? Why are patterns important in everyday life?				
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> • Section 13.1 Arithmetic and Geometric Sequences • Section 13.3 Arithmetic and Geometric Sums • Section 13.4 Infinite sequences 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> • Students will be able to determine general term and specific term • Determine sequence rules • Write in sigma notation 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 F.IF.3 F-BF.A.2 F-LE.A.2	
			Time Frame: 16 days	
			Materials: Textbook: 1997 Advanced Mathematics Richard Brown ISBN: 0-395-771145 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 15				
Theme: Combinatorics				
Essential Questions: When is a permutation used? When is a combination used? How can probability be applied in a real-world situation?				
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section 15.3 Permutations and Combinations • Section 15.4 Permutations with Repetitions/Circular Permutations 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to apply the rules of probability • Use calculators (technology) to solve probability equations 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 F-LE.B F-BF.A.1B	
			Time Frame: 10 days	
			Materials: Textbook: 1997 Advanced Mathematics Richard Brown ISBN: 0-395-771145 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
 MATHEMATICS DEPARTMENT
 PRECALCULUS

CONTENT: Chapter 16			
Theme: Probability			
Essential Questions: What is the difference between independent and dependent probability? How do permutations and combinations apply to probability?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section 16.1 Introduction to probability • Section 16.2 Probability of events occurring together • Section 16-4 Probability Problems Solved with Combinations 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Students will be able to apply the rules of probability • Use calculators (technology) to solve probability equations 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH 8.1.12.A.4 PFL 9.2.12.C.1 NJSLS MA 9-12 F-BF.A, A.1a, A.1b Time Frame: 10 days Materials: Textbook: 1997 Advanced Mathematics Richard Brown ISBN: 0-395-771145 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils, white boards.