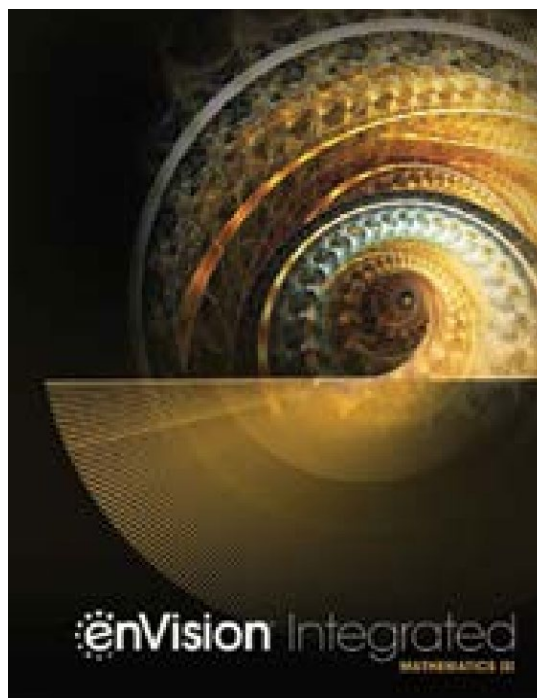
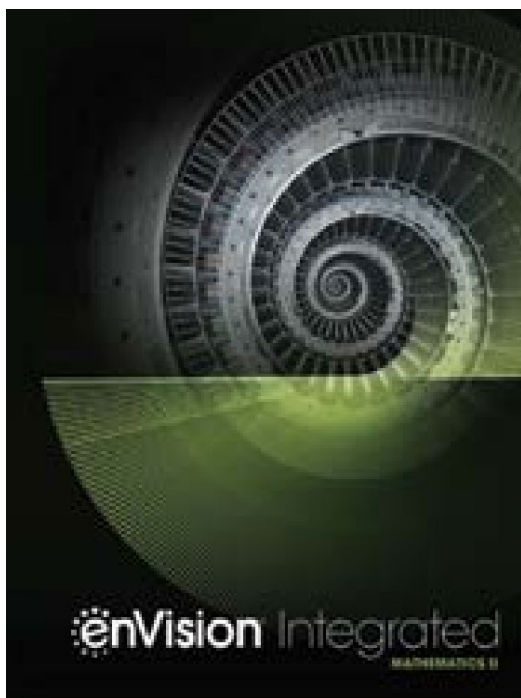


A Correlation of



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To the
**North Carolina
Standard Course of Study 2019
North Carolina Math 3**

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Standards for Mathematical Practice	
1. Make sense of problems and persevere in solving them.	<p>Mathematical practices are referenced throughout the enVision Integrated Mathematics series. The following citations are sample references.</p> <p>Mathematics II SE/TE: 5, 10, 17, 25, 33, 54, 62, 68, 73-74, 81 TE: 18A, 34B, 55A, 75B, 83B, 111, 120, 151B, 164B, 191B</p> <p>Mathematics III SE/TE: 39, 50, 52, 56, 67-68, 97, 99, 108, 119, 139 TE: 27, 36, 40A-40B, 47A-47B, 48, 88, 95, 111, 123A, 135</p>
2. Reason abstractly and quantitatively.	<p>Mathematical practices are referenced throughout the enVision Integrated Mathematics series. The following citations are sample references.</p> <p>Mathematics II SE/TE: 10, 31, 54, 62, 86, 88, 99, 109, 301, 352 TE: 47A, 83A, 89A, 205B, 212A, 229A-229B, 297A, 311A-311B, 319B, 328</p> <p>Mathematics III SE/TE: 52, 108, 153, 164, 219, 245, 251, 260, 304, 313 TE: 47A, 69A, 84A, 131A, 136, 140B, 155, 177A, 181, 185A</p>
3. Construct viable arguments and critique the reasoning of others.	<p>Mathematical practices are referenced throughout the enVision Integrated Mathematics series. The following citations are sample references.</p> <p>Mathematics II SE/TE: 9, 15-16, 23-24, 31, 38, 52-53, 60, 66, 341, 482 TE: 5B, 11A, 47A, 69B, 117A, 145A, 191B, 205A, 374A, 391A</p> <p>Mathematics III SE/TE: 10-11, 21, 28, 37, 44, 51, 66, 73, 82, 245 TE: 5A, 102, 109A, 113, 141, 154, 180, 355, 379A, 456</p>

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<p style="text-align: center;">North Carolina Standard Course of Study 2019 North Carolina Math 3</p>	<p style="text-align: center;">enVision Integrated Mathematics, ©2019</p>
<p>4. Model with mathematics.</p>	<p>Mathematical practices are referenced throughout the enVision Integrated Mathematics series. The following citations are sample references.</p> <p>Mathematics II SE/TE: 26, 82, 131, 176, 190, 236, 327, 364, 444, 498 TE: 26-26B, 82-82B, 131-131B, 176-176B, 190-190B, 236-236B, 327-327B, 364-364B, 444-444B, 498-498B</p> <p>Mathematics III SE/TE: 53, 100, 162, 202, 246, 332, 363, 439, 480, 527 TE: 53A-53B, 100A-100B, 162A-162B, 202A-202B, 246A-246B, 332A-332B, 363A-363B, 439A-439B, 480A-480B, 527A-527B</p>
<p>5. Use appropriate tools strategically.</p>	<p>Mathematical practices are referenced throughout the enVision Integrated Mathematics series. The following citations are sample references.</p> <p>Mathematics III SE/TE: 18, 43, 63, 111, 126, 145, 149, 171, 200, 276 TE: 13A, 34, 61A, 65, 101A, 147A, 169A, 270, 283, 369</p>
<p>6. Attend to precision.</p>	<p>Mathematical practices are referenced throughout the enVision Integrated Mathematics series. The following citations are sample references.</p> <p>Mathematics II SE/TE: 17, 30, 32, 39, 60-61, 65, 76, 80, 147, 168 TE: 27A, 37, 64, 70, 75A, 84, 118, 170B, 237B, 283</p> <p>Mathematics III SE/TE: 12, 28-29, 37, 44, 50-51, 54, 73, 136, 138, 144 TE: 23A-23B, 47B, 62, 85, 127, 129, 136, 157, 173, 185B</p>

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7. Look for and make use of structure.	<p>Mathematical practices are referenced throughout the enVision Integrated Mathematics series. The following citations are sample references.</p> <p>Mathematics II SE/TE: 8, 15, 23-24, 33, 40, 43, 52, 79, 107, 121 TE: 13, 27A, 28, 51, 55B, 65, 89B, 126, 132B, 146</p> <p>Mathematics III SE/TE: 33, 55, 82, 86, 147, 184, 189, 201, 250, 254 TE: 42, 80, 96, 143, 230, 336, 367, 409, 417, 443</p>
8. Look for and express regularity in repeated reasoning.	<p>Mathematical practices are referenced throughout the enVision Integrated Mathematics series. The following citations are sample references.</p> <p>Mathematics II SE/TE: 17, 51, 123, 125, 135, 174, 218, 267, 352, 363 TE: 47B, 69A, 83A, 89A, 103A, 120, 216, 330, 383, 521B</p> <p>Mathematics III SE/TE: 56, 74, 85, 98, 116, 129, 145, 152, 160, 287 TE: 49, 92A, 101A, 142, 161, 247A, 297A, 340A, 393A, 423A</p>
Number and Quantity	
The Complex Number System	
Use complex numbers in polynomial identities and equations.	
NC.M3.N-CN.9 Use the Fundamental Theorem of Algebra to determine the number and potential types of solutions for polynomial functions.	<p>Mathematics II SE/TE: 220-221 TE: 222</p> <p>Mathematics III SE/TE: 103, 105-107 TE: 100B, 101A, 108B</p>

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Algebra	
Seeing Structure in Expressions	
Interpret the structure of expressions.	
NC.M3.A-SSE.1 Interpret expressions that represent a quantity in terms of its context.	<p>Mathematics II SE/TE: 51, 54, 59, 61, 74, 81, 88, 105, 109, 113 TE: 83B, 88B, 130A, 132B, 170B, 175B, 197B, 204A, 255A, 262A</p> <p>Mathematics III SE/TE: 19, 30, 65, 67, 71, 73, 95, 99, 115, 125 TE: 91B, 92B, 139B, 146B, 153B, 161B, 201B, 210A, 219B, 234A</p>
NC.M3.A-SSE.1a Identify and interpret parts of a piecewise, absolute value, polynomial, exponential and rational expressions including terms, factors, coefficients, and exponents.	<p>Mathematics II SE/TE: 30, 47, 49, 52, 71, 75, 195, 199, 203, 215 TE: 47B, 54B, 55B, 69A, 83B, 89A-89B, 151B, 158A, 170A-170B, 249A</p> <p>Mathematics III SE/TE: 17, 20, 71, 74, 81, 83, 85, 102, 149, 230 TE: 61A-61B, 68B, 69A-69B, 75A, 84A-84B, 91B, 92B, 100A-100B, 131A, 140A</p>
NC.M3.A-SSE.1b Interpret expressions composed of multiple parts by viewing one or more of their parts as a single entity to give meaning in terms of a context.	<p>Mathematics II SE: 18-25, 27-33, 47-54, 55-62, 63-68, 110-116, 117-123, 229-235, 237-242, 275-280 TE: 18A-25B, 27A-33B, 47A-54B, 55A-62B, 63A-68B, 110A-116B, 117A-123B, 229A-235B, 237A-242B, 275A-280B</p> <p>Mathematics III SE: 13-22, 23-30, 69-75, 109-116, 131-139, 140-146, 147-153, 185-192, 203-210, 227-234 TE: 13A-22B, 23A-30B, 69A-75B, 109A-116B, 131A-139B, 140A-146B, 147A-153B, 185A-192B, 203A-210B, 227A-234B</p>

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NC.M3.A-SSE.2 Use the structure of an expression to identify ways to write equivalent expressions	<p>Mathematics II SE: 63-68, 69-74, 75-81, 83-88, 89-94, 110-116, 117-123, 151-157, 158-163, 212-222 TE: 63A-68B, 69A-74B, 75A-81B, 83A-88B, 89A-94B, 110A-116B, 117A-123B, 151A-157B, 158A-163B, 212A-222B</p> <p>Mathematics III SE: 76-83, 84-91, 92-99, 169-176, 177-184, 267-272, 379-386 TE: 76A-83B, 84A-91B, 92A-99B, 169A-176B, 177A-184B, 267A-272B, 379A-386B</p>
Seeing Structure in Expressions	
Write expressions in equivalent forms to solve problems.	
NC.M3.A-SSE.3 Write an equivalent form of an exponential expression by using the properties of exponents to transform expressions to reveal rates based on different intervals of the domain.	<p>Mathematics II SE: 69-74, 75-81, 83-88, 89-94, 151-157, 191-197 TE: 69A-74B, 75A-81B, 83A-88B, 89A-94B, 151A-157B, 191A-191B</p> <p>Mathematics III SE: 76-83, 84-91, 92-99, 169-176, 177-184, 267-272, 379-386 TE: 76A-83B, 84A-91B, 92A-99B, 169A-176B, 177A-184B, 267A-272B, 379A-386B</p>
Arithmetic with Polynomial and Rational Expressions	
Understand the relationship between zeros and factors of polynomials.	
NC.M3.A-APR.2 Understand and apply the Remainder Theorem.	<p>Mathematics III SE: 84-91 TE: 84A-91B</p>
NC.M3.A-APR.3 Understand the relationship among factors of a polynomial expression, the solutions of a polynomial equation and the zeros of a polynomial function.	<p>Mathematics II SE: 69-74, 75-81, 83-88, 89-94, 103-109, 110-116, 117-123, 145-150, 151-157 TE: 69A-74B, 75A-81B, 83A-88B, 89A-94B, 103A-109B, 110A-116B, 117A-123B, 145A-150B, 151A-157B</p> <p>Mathematics III SE: 92-99 TE: 92A-99B</p>

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Arithmetic with Polynomial and Rational Expressions	
Rewrite rational expressions.	
NC.M3.A-APR.6 Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x)+r(x)/b(x)$, where $a(x), b(x), q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$.	Mathematics III SE: 131-139, 140-146, 147-153 TE: 131A-139B, 140A-146B, 147A-153B
NC.M3.A-APR.7 Understand the similarities between arithmetic with rational expressions and arithmetic with rational numbers.	Mathematics III SE: 140-146, 147-153 TE: 140A-146B, 147A-153B
NC.M3.A-APR.7a Add and subtract two rational expressions, (x) and (x) , where the denominators of both (x) and $b(x)$ are linear expressions.	Mathematics III SE: 147-153 TE: 147A-153B
NC.M3.A-APR.7b Multiply and divide two rational expressions.	Mathematics III SE: 140-146 TE: 140A-146B
Creating Equations	
Create equations that describe numbers or relationships.	
NC.M3.A-CED.1 Create equations and inequalities in one variable that represent absolute value, polynomial, exponential, and rational relationships and use them to solve problems algebraically and graphically.	Mathematics II SE: 145-150, 151-157, 164-169, 191-197, 198-204 TE: 145A-150B, 151A-157B, 164A-169B, 191A-197B, 198A-204B Mathematics III SE: 40-46, 101-108, 154-161, 193-201, 273-279 TE: 40A-46B, 101A-108B, 154A-161B, 193A-201B, 273A-279B
NC.M3.A-CED.2 Create and graph equations in two variables to represent absolute value, polynomial, exponential and rational relationships between quantities.	Mathematics II SE: 18-25, 27-33, 34-40, 103-109, 110-116, 117-123, 124-130, 229-235, 237-242, 243-248 TE: 18A-25B, 27A-33B, 34A-40B, 103A-109B, 110A-116B, 117A-123B, 124A-130B, 229A-235B, 237A-242B, 243A-248B Mathematics III SE: 23-30, 61-68, 131-139, 185-192, 227-234, 235-245, 247-253, 261-266, 323-331, 333-339 TE: 23A-30B, 61A-68B, 131A-139B, 185A-192B, 227A-234B, 235A-245B, 247A-253B, 261A-266B, 323A-331B, 333A-339B

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NC.M3.A-CED.3 Create systems of equations and/or inequalities to model situations in context.	<p>Mathematics II SE: 145-150, 151-157, 164-169, 170-175, 191-197, 198-204, 205-211 TE: 145A-150B, 151A-157B, 164A-169B, 170A-175B, 191A-197B, 198A-204B, 205A-211B</p> <p>Mathematics III SE: 40-46, 47-52, 101-108, 154-161, 193-201, 273-279, 355-362 TE: 40A-46B, 47A-52B, 101A-108B, 154A-161B, 193A-201B, 273A-279B, 355A-362B</p>
Reasoning with Equations and Inequalities	
Understand solving equations as a process of reasoning and explain the reasoning.	
NC.M3.A-REI.1 Justify a solution method for equations and explain each step of the solving process using mathematical reasoning.	<p>Mathematics II SE: 145-150, 151-157, 164-169, 183, 186-189, 191-197, 198-204 TE: 145A-150B, 151A-157B, 164A-169B, 183A-189B, 191A-197B, 198A-204B</p> <p>Mathematics III SE: 40-46, 101-108, 154-161, 193-201, 273-279, 355-362 TE: 40A-46B, 101A-108B, 154A-161B, 193A-201B, 273A-279B, 355A-362B</p>
NC.M3.A-REI.2 Solve and interpret one variable rational equations arising from a context, and explain how extraneous solutions may be produced.	<p>Mathematics II SE: 164-169, 183, 186-189, 191-197 TE: 164A-169B, 183A-189B</p> <p>Mathematics III SE: 154-161, 193-201 TE: 154A-161B, 193A-201B</p>
Reasoning with Equations and Inequalities	
Represent and solve equations and inequalities graphically.	
NC.M3.A-REI.11 Extend an understanding that the x -coordinates of the points where the graphs of two equations $y=f(x)$ and $y=g(x)$ intersect are the solutions of the equation $f(x)=g(x)$ and approximate solutions using a graphing technology or successive approximations with a table of values.	<p>Mathematics II SE: 170-175 TE: 170A-175B</p> <p>Mathematics III SE: 40-46 TE: 40A-46B</p>

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Functions	
Interpreting Functions	
Understand the concept of a function and use function notation.	
NC.M3.F-IF.1 Extend the concept of a function by recognizing that trigonometric ratios are functions of angle measure.	<p>Mathematics II SE: 18-25, 27-33, 34-40, 103-109, 110-116, 117-123, 124-130, 229-235, 237-242, 243-248, 249-255, 263-268 TE: 18A-25B, 27A-33B, 34A-40B, 103A-109B, 110A-116B, 117A-123B, 124A-130B, 229A-235B, 237A-242B, 243A-248B, 249A-255B, 263A-268B</p> <p>Mathematics III SE: 297-304 TE: 297A-304B</p>
NC.M3.F-IF.2 Use function notation to evaluate piecewise defined functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	<p>Mathematics II SE: 249-255, 263-268, 422-428 TE: 249A-255B, 263A-268B, 422A-428B</p> <p>Mathematics III SE: 23-30 TE: 23A-30B</p>
Interpreting Functions	
Interpret functions that arise in applications in terms of the context.	
NC.M3.F-IF.4 Interpret key features of graphs, tables, and verbal descriptions in context to describe functions that arise in applications relating two quantities to include periodicity and discontinuities.	<p>Mathematics II SE: 18-25, 27-33, 34-40, 103-109, 110-116, 117-123, 124-130, 229-235, 237-242, 243-248 TE: 18A-25B, 27A-33B, 34A-40B, 103A-109B, 110A-116B, 117A-123B, 124A-130B, 229A-235B, 237A-242B, 243A-248B</p> <p>Mathematics III SE: 5-12, 13-22, 23-30, 61-68, 109-116, 123-130, 131-139, 185-192, 227-234, 261-266 TE: 5A-12B, 13A-22B, 23A-30B, 61A-68B, 109A-116B, 123A-130B, 131A-139B, 185A-192B, 227A-234B, 261A-266B</p>

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Interpreting Functions	
Analyze functions using different representations.	
NC.M3.F-IF.7 Analyze piecewise, absolute value, polynomials, exponential, rational, and trigonometric functions (sine and cosine) using different representations to show key features of the graph, by hand in simple cases and using technology for more complicated cases, including: domain and range; intercepts; intervals where the function is increasing, decreasing, positive, or negative; rate of change; relative maximums and minimums; symmetries; end behavior; period; and discontinuities.	<p>Mathematics II SE: 18-25, 27-33, 34-40, 103-109, 110-116, 117-123, 124-130, 229-235, 237-242, 243-248 TE: 18A-25B, 27A-33B, 34A-40B, 103A-109B, 110A-116B, 117A-123B, 124A-130B, 229A-235B, 237A-242B, 243A-248B</p> <p>Mathematics III SE: 5-12, 13-22, 23-30, 61-68, 109-116, 123-130, 131-139, 185-192, 227-234, 261-266 TE: 5A-12B, 13A-22B, 23A-30B, 61A-68B, 109A-116B, 123A-130B, 131A-139B, 185A-192B, 227A-234B, 261A-266B</p>
NC.M3.F-IF.9 Compare key features of two functions using different representations by comparing properties of two different functions, each with a different representation (symbolically, graphically, numerically in tables, or by verbal descriptions).	<p>Mathematics II SE/TE: 30 TE: 124B, 131-131B</p> <p>Mathematics III SE/TE: 72 TE: 69A</p>
Building Functions	
Build a function that models a relationship between two quantities.	
NC.M3.F-BF.1 Write a function that describes a relationship between two quantities.	<p>Mathematics II SE: 18-25, 27-33, 34-40, 103-109, 110-116, 117-123, 124-130, 229-235, 237-242, 243-248 TE: 18A-25B, 27A-33B, 34A-40B, 103A-109B, 110A-116B, 117A-123B, 124A-130B, 229A-235B, 237A-242B, 243A-248B</p> <p>Mathematics III SE: 5-12, 13-22, 23-30, 61-68, 109-116, 123-130, 131-139, 185-192, 227-234, 261-266 TE: 5A-12B, 13A-22B, 23A-30B, 61A-68B, 109A-116B, 123A-130B, 131A-139B, 185A-192B, 227A-234B, 261A-266B</p>
NC.M3.F-BF.1a Build polynomial and exponential functions with real solution(s) given a graph, a description of a relationship, or ordered pairs (include reading these from a table).	<p>Mathematics III SE: 61-68, 71, 74-75, 227-234 TE: 61A-68B, 227A-234B</p>

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NC.M3.F-BF.1b Build a new function, in terms of a context, by combining standard function types using arithmetic operations.	Mathematics III SE: 203-210 TE: 203A-210B
Building Functions	
Build new functions from existing functions.	
NC.M3.F-BF.3 Extend an understanding of the effects on the graphical and tabular representations of a function when replacing $f(x)$ with $k \cdot f(x)$, $f(x)+k$, $f(x+k)$ to include $f(k \cdot x)$ for specific values of k (both positive and negative).	Mathematics II SE: 256-262, 263-268, 269-274 TE: 256A-262B, 263A-268B, 269A-274B Mathematics III SE: 13-22, 109-116, 131-139, 185-192, 227-234, 262, 265, 340-347 TE: 13A-22B, 109A-116B, 131A-139B, 185A-192B, 227A-234B, 340A-347B
NC.M3.F-BF.4 Find an inverse function.	Mathematics II SE: 281-286 TE: 281A-286B Mathematics III SE: 211-219, 355-362 TE: 211A-219B, 355A-362B
NC.M3.F-BF.4a Understand the inverse relationship between exponential and logarithmic, quadratic and square root, and linear to linear functions and use this relationship to solve problems using tables, graphs, and equations.	Mathematics III SE: 254-260, 261-266, 267-272, 273-279 TE: 254A-260B, 261A-266B, 267A-272B, 273A-279B
NC.M3.F-BF.4b Determine if an inverse function exists by analyzing tables, graphs, and equations.	Mathematics III SE: 211-219 TE: 211A-219B
NC.M3.F-BF.4c If an inverse function exists for a linear, quadratic and/or exponential function, f , represent the inverse function, f^{-1} , with a table, graph, or equation and use it to solve problems in terms of a context.	Mathematics III SE: 211-219, 355-362 TE: 211A-219B, 355A-362B

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Linear, Quadratic, and Exponential Models	
Construct and compare linear and exponential models and solve problems.	
NC.M3.F-LE.3 Compare the end behavior of functions using their rates of change over intervals of the same length to show that a quantity increasing exponentially eventually exceeds a quantity increasing as a polynomial function.	Mathematics III SE: 227-234, 235-245, 247-253 TE: 227A-234B, 235A-245B, 247A-253B
NC.M3.F-LE.4 Use logarithms to express the solution to $ab^{ct}=d$ where a , b , c , and d are numbers and evaluate the logarithm using technology.	Mathematics III SE: 273-279 TE: 273A-279B
Trigonometric Functions	
Extend the domain of trigonometric functions using the unit circle.	
NC.M3.F-TF.1 Understand radian measure of an angle as: <ul style="list-style-type: none"> • The ratio of the length of an arc on a circle subtended by the angle to its radius. • A dimensionless measure of length defined by the quotient of arc length and radius that is a real number. • The domain for trigonometric functions. 	Mathematics II SE: 569-576 TE: 569A-576B Mathematics III SE: 305-315 TE: 305A-315B
NC.M3.F-TF.2 Build an understanding of trigonometric functions by using tables, graphs and technology to represent the cosine and sine functions.	Mathematics III SE: 316-322, 323-331, 333-339 TE: 316A-322B, 323A-331B, 333A-339B
NC.M3.F-TF.2a Interpret the sine function as the relationship between the radian measure of an angle formed by the horizontal axis and a terminal ray on the unit circle and its y coordinate.	Mathematics III SE: 316-317 TE: 316A-322B
NC.M3.F-TF.2b Interpret the cosine function as the relationship between the radian measure of an angle formed by the horizontal axis and a terminal ray on the unit circle and its x coordinate.	Mathematics III SE: 316-317 TE: 316A-322B
Trigonometric Functions	
Model periodic phenomena with trigonometric functions.	
NC.M3.F-TF.5 Use technology to investigate the parameters, a , b , and h of a sine function, $(x)=a \sin(b \cdot x)+h$, to represent periodic phenomena and interpret key features in terms of a context.	Mathematics III SE: 323-331, 333-339 TE: 323A-331B, 333A-339B

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Geometry	
Congruence	
Prove geometric theorems.	
NC.M3.G-CO.10 Verify experimentally properties of the centers of triangles (centroid, in center, and circumcenter).	Mathematics II SE: 319-326, 328-335, 336-342, 343-348, 445-451 TE: 319A-326B, 328A-335B, 336A-342B, 343A-348B, 445A-451B
NC.M3.G-CO.11 Prove theorems about parallelograms. <ul style="list-style-type: none"> • Opposite sides of a parallelogram are congruent. • Opposite angles of a parallelogram are congruent. • Diagonals of a parallelogram bisect each other. • If the diagonals of a parallelogram are congruent, then the parallelogram is a rectangle. 	Mathematics II SE: 374-382, 383-390, 391-397, 398-405 TE: 374A-382B, 383A-390B, 391A-397B, 398A-405B
NC.M3.G-CO.14 Apply properties, definitions, and theorems of two-dimensional figures to prove geometric theorems and solve problems.	Mathematics II SE: 357-363, 365-373, 374-382, 383-390, 391-397, 398-405 TE: 357A-363B, 365A-373B, 374A-382B, 383A-390B, 391A-397B, 398A-405B
Circles	
Understand and apply theorems about circles.	
NC.M3.G-C.2 Understand and apply theorems about circles. <ul style="list-style-type: none"> • Understand and apply theorems about relationships with angles and circles, including central, inscribed and circumscribed angles. • Understand and apply theorems about relationships with line segments and circles including, radii, diameter, secants, tangents and chords. 	Mathematics III SE: 519-526, 528-535, 536-542, 543-550 TE: 519A-526B, 528A-535B, 536A-542B, 543A-550B
NC.M3.G-C.5 Using similarity, demonstrate that the length of an arc, s , for a given central angle is proportional to the radius, r , of the circle. Define radian measure of the central angle as the ratio of the length of the arc to the radius of the circle, s/r . Find arc lengths and areas of sectors of circles.	Mathematics III SE: 511-518 TE: 511A-518B

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Expressing Geometric Properties with Equations	
Translate between the geometric description and the equation for a conic section.	
NC.M3.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.	Mathematics III SE: 491-496 TE: 491A-496B
Geometric Measurement & Dimension	
Explain volume formulas and use them to solve problems.	
NC.M3.G-GMD.3 Use the volume formulas for prisms, cylinders, pyramids, cones, and spheres to solve problems.	Mathematics III SE: 557-562, 563-570, 572-578, 579-584 TE: 557A-562B, 563A-570B, 572A-578B, 579A-584B
Geometric Measurement & Dimension	
Visualize relationships between two-dimensional and three-dimensional objects.	
NC.M3.G-GMD.4 Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	Mathematics III SE: 557-562 TE: 557A-562B
Modeling with Geometry	
Apply geometric concepts in modeling situations.	
NC.M3.G-MG.1 Apply geometric concepts in modeling situations <ul style="list-style-type: none"> • Use geometric and algebraic concepts to solve problems in modeling situations: • Use geometric shapes, their measures, and their properties, to model real-life objects. • Use geometric formulas and algebraic functions to model relationships. • Apply concepts of density based on area and volume. • Apply geometric concepts to solve design and optimization problems. 	Mathematics III SE/TE: 459, 462, 465, 472, 487, 489-490, 496, 562, 564-567, 570 TE: 466B, 472B, 571A-571B
Statistics and Probability	
Making Inference and Justifying Conclusions	
Understand and evaluate random processes underlying statistical experiments.	
NC.M3.S-IC.1 Understand the process of making inferences about a population based on a random sample from that population.	Mathematics III SE: 393-399, 400-406 TE: 393A-399B, 400A-406B

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Making Inference and Justifying Conclusions	
Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	
NC.M3.S-IC.3 Recognize the purposes of and differences between sample surveys, experiments, and observational studies and understand how randomization should be used in each.	Mathematics III SE: 400-406 TE: 400A-406B
NC.M3.S-IC.4 Use simulation to understand how samples can be used to estimate a population mean or proportion and how to determine a margin of error for the estimate.	Mathematics III SE: 407-414, 415-422, 423-430 TE: 407A-414B, 415A-422B, 423A-430B
NC.M3.S-IC.5 Use simulation to determine whether observed differences between samples from two distinct populations indicate that the two populations are actually different in terms of a parameter of interest.	Mathematics III SE: 431-438 TE: 431A-438B
NC.M3.S-IC.6 Evaluate articles and websites that report data by identifying the source of the data, the design of the study, and the way the data are graphically displayed.	Mathematics III SE: 431-438 TE: 431A-438B

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