

Glencoe/McGraw-Hill

**Glencoe Advanced Mathematical Concepts:
Precalculus with Applications, ©2004
Mathematics, K-12; C. 9–12
14. Pre-Calculus
ISBN# 0-07-860861-9**

correlated to

**North Carolina
Mathematics Standard Course of study
Pre-Calculus**

**GLENCOE/MCGRAW-HILL
GLENCOE ADVANCED MATHEMATICAL CONCEPTS:
PRECALCULUS WITH APPLICATIONS ©2004**

**CORRELATED TO
NORTH CAROLINA
MATHEMATICS STANDARD COURSE OF STUDY PRE-CALCULUS**

OBJECTIVES	PAGE REFERENCES
COMPETENCY GOAL 1: The learner will describe geometric figures in the coordinate plane algebraically.	
1.01 Transform relations in two dimensions; describe the results algebraically and geometrically.	SE: 6, 7, 8, 27–29 32–35, 52–55, 67–69 TWE: 6, 7, 8, 27–29 32–35, 52–55, 67–69
1.02 Use the quadratic relations (parabola, circle, ellipse, hyperbola) to model and solve problems; justify results.	
<ul style="list-style-type: none"> • Solve using tables, graphs, and algebraic properties. 	SE: 624–626, 631–637, 642–649, 653–658 TWE: 624–626, 631–637, 642–649, 653–658
<ul style="list-style-type: none"> • Interpret the constants and coefficients in the context of the problem. 	SE: 624, 625, 632–633, 634, 635, 644, 645, 647, 655–656, 657 TWE: 624, 625, 632–633, 634, 635, 644, 645, 647, 655–656, 657
1.03 Operate with vectors in two dimensions to model and solve problems.	SE: 487, 488, 489, 490 TWE: 487, 488, 489, 490
COMPETENCY GOAL 2: The learner will use relations and functions to solve problems.	
2.01 Use functions (polynomial, power, rational, exponential, logarithmic, logistic piecewise-defined, and greatest integer) to model and solve problems; justify results.	

**GLENCOE/MCGRAW-HILL
GLENCOE ADVANCED MATHEMATICAL CONCEPTS:
PRECALCULUS WITH APPLICATIONS ©2004**

CORRELATED TO

**NORTH CAROLINA
MATHEMATICS STANDARD COURSE OF STUDY PRE-CALCULUS**

OBJECTIVES	PAGE REFERENCES
<ul style="list-style-type: none"> • Solve using graphs and algebraic properties. 	SE: 45, 46, 47–48, 137–141, 180, 181, 182, 183, 184, 185, 707, 718–719, 720, 721, 722 TWE: 45, 46, 47–48, 137–141, 180, 181, 182, 183, 184, 185, 707, 718–719, 720, 721, 722
<ul style="list-style-type: none"> • Interpret the constants, coefficients, and bases in the context of the problem. 	SE: 47, 54, 137–141, 181, 182, 183, 184, 719, 720, 721, 722 TWE: 47, 54, 137–141, 181, 182, 183, 184, 719, 720, 721, 722
2.02 Use trigonometric and inverse trigonometric functions to model and solve problems; justify results.	
<ul style="list-style-type: none"> • Solve using graphs and algebraic properties. 	SE: 292–293, 294, 295, 299, 305–308, 300, 301, 405, 409 TWE: 292–293, 294, 295, 299, 305–308, 300, 301, 405, 409
<ul style="list-style-type: none"> • Create and identify transformations with respect to period, amplitude, and vertical and horizontal shifts. 	SE: 180–185, 368–372, 378–382, 705 TWE: 180–185, 368–372, 378–382, 705
<ul style="list-style-type: none"> • Develop and use the law of sines and the law of cosines. 	SE: 313–318, 320–323, 327–329 TWE: 313–318, 320–323, 327–329

**GLENCOE/MCGRAW-HILL
GLENCOE ADVANCED MATHEMATICAL CONCEPTS:
PRECALCULUS WITH APPLICATIONS ©2004**

CORRELATED TO

**NORTH CAROLINA
MATHEMATICS STANDARD COURSE OF STUDY PRE-CALCULUS**

OBJECTIVES	PAGE REFERENCES
2.03 For sets of data, create and use calculator-generated models of linear, polynomial, exponential, trigonometric, power, logistic, and logarithmic functions.	
<ul style="list-style-type: none"> • Interpret the constants, coefficients, and bases in the context of the data. 	SE: 138, 153, 172, 208, 232, 253, 265, 278, 286, 323, 369, 389, 433, 705 TWE: 138, 153, 172, 208, 232, 253, 265, 278, 286, 323, 369, 389, 433, 705
<ul style="list-style-type: none"> • Check models for goodness-of-fit; use the most appropriate model to draw conclusions or make predictions. 	SE: 38, 39, 40, 258, 259 TWE: 38, 39, 40, 258, 259
2.04 Use the composition and inverse of functions to model and solve problems.	SE: 14, 15, 16, 152, 153, 154, 155, 719, 720 TWE: 14, 15, 16, 152, 153, 154, 155, 719, 720
2.05 Use polar equations to model and solve problems.	
<ul style="list-style-type: none"> • Solve using graphs and algebraic properties 	SE: 556, 557, 561, 562, 563, 564 TWE: 556, 557, 561, 562, 563, 564
<ul style="list-style-type: none"> • Interpret the constants and coefficients in the context of the problem. 	SE: 556, 557, 561, 562, 563, 564 TWE: 556, 557, 561, 562, 563, 564
2.06 Use parametric equations to model and solve problems.	SE: 520, 521, 522, 523, 527–530, 662–666 TWE: 520, 521, 522, 523, 527–530, 662–666

**GLENCOE/MCGRAW-HILL
GLENCOE ADVANCED MATHEMATICAL CONCEPTS:
PRECALCULUS WITH APPLICATIONS ©2004**

CORRELATED TO

**NORTH CAROLINA
MATHEMATICS STANDARD COURSE OF STUDY PRE-CALCULUS**

OBJECTIVES	PAGE REFERENCES
2.07 Use recursively-defined functions to model and solve problems.	
<ul style="list-style-type: none"> • Find the sum of a finite sequence. 	SE: 769, 774, 778 TWE: 769, 774, 778
<ul style="list-style-type: none"> • Find the sum of an infinite sequence. 	SE: 778–779 TWE: 778–779
<ul style="list-style-type: none"> • Determine if a given series converges or diverges. 	SE: 786, 787, 788, 789, 790 TWE: 786, 787, 788, 789, 790
<ul style="list-style-type: none"> • Translate between recursive and explicit representations. 	SE: 760 TWE: 760
2.08 Explore the limit of a function graphically, numerically, and algebraically.	SE: 774–777, 921, 941–945, 962 TWE: 774–777, 921, 941–945, 962

GLENCOE/McGraw-Hill
Atlantic Southeast Region
6510 Jimmy Carter Boulevard
Norcross, GA 30071
770/613-0281
800/731-2365