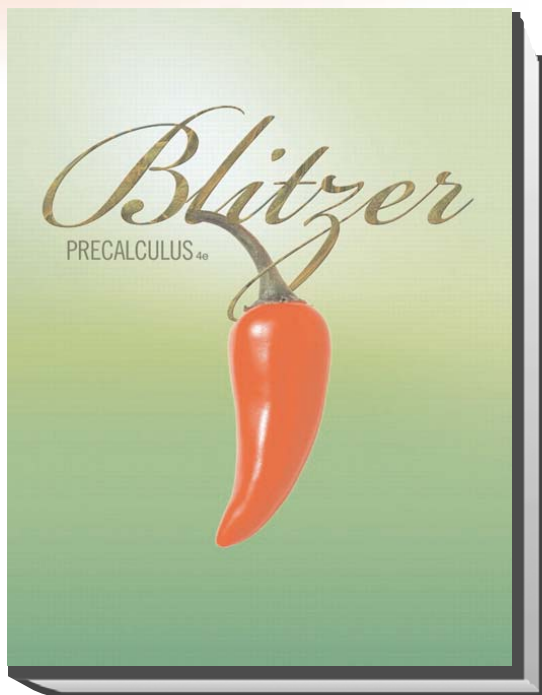


# Prentice Hall

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C O R R E L A T E D T O

North Carolina Essential Standards Draft for Pre-Calculus

PEARSON

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Correlated to:

**North Carolina Essential Standards Draft dated 3/26/09 for Pre-Calculus**

North Carolina Essential Standards Draft dated 3/26/09 for Pre-Calculus	Precalculus © 2010 (Blitzer)
<b>Pre-Calculus Essential Standards (3/26/09)</b>	
<b>Pre-Calculus</b>	
A.D.1 Use functions (polynomial, power, rational, exponential, logarithmic, logistic, piecewise-defined, and greatest integer) to model and solve problems; justify results.	
A.D.1.a Solve using graphs and algebraic properties.	<b>SE/TE:</b> 256-257, 262, 313-314, 352-353, 356-357, 383, 386, 394, 396-399, 407, 409, 411-412, 430-436, 437-443, 447-451, 454-456, 457, 584, 726
A.D.1.b Interpret the constants, coefficients, and bases in the context of the problem.	<i>Opportunities to address this standard can be found on the following pages:</i> <b>SE/TE:</b> 256-257, 262, 313-314, 352-353, 356-357, 383, 386, 394, 396-399, 407, 409, 411-412, 430-436, 437-451, 454-456, 457, 584, 726
A.D.1.c Understand the relationship between the exponential and logarithmic functions.	<b>SE/TE:</b> 400-402, 410-412, 425-435, 452, 454-455, 457, 458, 584, 872, 949, 1035, 1086
A.D.1.d Use the laws of exponents to prove the basic properties of a logarithm.	<b>SE/TE:</b> A-1-A-2
A.D.2 Create and use calculator-generated models of linear, polynomial, exponential, trigonometric, power, logistic, and logarithmic functions of bivariate data to solve problems.	
A.D.2.a Interpret the constants, coefficients, and bases in the context of the data.	<i>Opportunities to address this standard can be found on the following pages:</i> <b>SE/TE:</b> 187-188, 190-192, 272, 276, 314, 394, 398-399, 409, 412, 444-446, 449-451, 456, 536
A.D.2.b Check models for goodness-of-fit; use the most appropriate model to draw conclusions and make predictions.	<b>SE/TE:</b> 187-188, 190-192, 272, 276, 314, 394, 398-399, 409, 412, 449
A.D.2.c Evaluate sets of data considering the source and the design of the study.	<i>Opportunities to address this standard can be found on the following pages:</i> <b>SE/TE:</b> 187-188, 190-192, 272, 276, 314, 394, 398-399, 409, 412, 444-446, 449-451, 456, 536
A.D.2.d Recognize when arguments based on data confuse correlation with causation.	<i>Opportunities to address this standard can be found on the following pages:</i> <b>SE/TE:</b> 187-188, 190-192, 272, 276, 314, 394, 398-399, 409, 412, 444-446, 449-451, 456, 536
A.D.3 Use graphs and algebraic properties to solve problems involving trigonometric and inverse trigonometric functions; justify results.	
A.D.3.a Define trigonometric functions on the unit circle.	<b>SE/TE:</b> 477
A.D.3.b Create and identify transformations with respect to period, amplitude, and vertical and horizontal shifts.	<b>SE/TE:</b> 518-530, 533-534, 539-544, 546-547, 549, 581-582, 583
A.D.3.c Develop and use the law of sines and the law of cosines.	<b>SE/TE:</b> 644-655, 656-664, 685, 723-724, 725, 804, 950, 1036
A.D.3.d Use sum, difference, double angle, and halfangle identities to find exact values and establish other identities.	<b>SE/TE:</b> 598-604, 606, 608-610, 612-615, 618, 640-641, 642, 726, 1086

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A.D.4 Use polar equations to model and solve problems.	
A.D.4.a Solve using graphs and algebraic properties.	<b>SE/TE:</b> 684
A.D.4.b Interpret the constants and coefficients in the context of the problem.	<i>Opportunities to address this standard can be found on the following pages:</i> <b>SE/TE:</b> 675-685
A.D.5 Investigate the behavior of	
A.D.5.a Find the sum of a finite sequence.	<b>SE/TE:</b> 957-958, 960-962, 966-971, 975-978, 983-985, 987, 1031-1032, 1034, 1035
A.D.5.b Find the sum of an infinite sequence.	<b>SE/TE:</b> 981, 983, 985, 987, 1032, 1034
A.D.5.c Determine whether a given series converges or diverges.	<i>Opportunities to address this standard can be found on the following pages:</i> <b>SE/TE:</b> 980-981
A.D.5.d Translate between recursive and explicit representations.	<i>Opportunities to address this standard can be found on the following page:</i> <b>SE/TE:</b> 954
A.D.6 Explore the limit of a function graphically, numerically, and algebraically.	<b>SE/TE:</b> 1038-1049, 1050-1062, 1069-1070, 1084, 1085, 1086
G.D.1 Transform relations in two dimensions; describe the results algebraically and geometrically.	<b>SE/TE:</b> 160, 204-219, 272-273, 275, 285, 287, 346-347, 355-356, 379, 383, 392-393, 397, 405-406, 411, 453-454, 518-530, 533-534, 539-544, 546-547, 549, 581-582, 583, 642, 803, 949, 1035, 1086
G.D.2 Use major features of the parabola, circle, ellipse, and hyperbola to model and solve real world mathematical situations.	
G.D.2.a Solve using tables, graphs, and algebraic properties.	<b>SE/TE:</b> 882-883, 884, 896-899, 908-912, 943, 946-949
G.D.2.b Interpret the constants and coefficients in the context of the problem.	<i>Opportunities to address this standard can be found on the following pages:</i> <b>SE/TE:</b> 882-883, 884, 896-899, 908-912, 946-949
S.D.1 Summarize and analyze univariate data to solve problems.	
S.D.1.a Apply and compare methods of data collection.	<b>For content that meets this standard, please visit <a href="http://www.prenhall.com/blitzer">www.prenhall.com/blitzer</a>.</b>  <b>Thinking Mathematically, 4th Edition:</b> 681-684
S.D.1.b Apply statistical principles and methods in sample surveys.	<b>For content that meets this standard, please visit <a href="http://www.prenhall.com/blitzer">www.prenhall.com/blitzer</a>.</b>  <b>Thinking Mathematically, 4th Edition:</b> 680-682
S.D.1.c Determine measures of central tendency and spread.	<b>For content that meets this standard, please visit <a href="http://www.prenhall.com/blitzer">www.prenhall.com/blitzer</a>.</b>  <b>Thinking Mathematically, 4th Edition:</b> 692-693, 695-697, 700, 705

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S.D.1.d Recognize, define, and use the normal distribution curve.	<b>For content that meets this standard, please visit <a href="http://www.prenhall.com/blitzer">www.prenhall.com/blitzer</a>.</b>  <b>Thinking Mathematically, 4th Edition: 712-715, 717, 719-723</b>
S.D.1.e Interpret graphical displays of univariate data.	<b>For content that meets this standard, please visit <a href="http://www.prenhall.com/blitzer">www.prenhall.com/blitzer</a>.</b>  <b>Thinking Mathematically, 4th Edition: 685, 687-688</b>
S.D.1.f Compare distributions of univariate data.	<b>For content that meets this standard, please visit <a href="http://www.prenhall.com/blitzer">www.prenhall.com/blitzer</a>.</b>  <b>Thinking Mathematically, 4th Edition: 706-710, 714-717</b>
S.D.2 Use theoretical and experimental probability to model and solve problems.	
S.D.2.a Use addition and multiplication principles.	<b>SE/TE: 1021-1022, 1024-1025, 1027, 1033, 1034</b>
S.D.2.b Calculate and apply permutations and combinations.	<b>SE/TE: 1006-1014, 1033, 1034</b>
S.D.2.c Create and use simulations for probability models.	<b>For content that meets this standard, please visit <a href="http://www.prenhall.com/blitzer">www.prenhall.com/blitzer</a>.</b>  <b>Thinking Mathematically, 4th Edition: 624-625, 630-633, 660</b> <i>Opportunities to further address this standard can be found on the following pages:</i> <b>SE/TE: 1015-1028</b>
S.D.2.d Find expected values and determine fairness.	<b>For content that meets this standard, please visit <a href="http://www.prenhall.com/blitzer">www.prenhall.com/blitzer</a>.</b>  <b>Thinking Mathematically, 4th Edition: 663-667</b>
S.D.2.e Identify and use discrete random variables to solve problems.	<b>For content that meets this standard, please visit <a href="http://www.prenhall.com/blitzer">www.prenhall.com/blitzer</a>.</b>  <b>Thinking Mathematically, 4th Edition: 627-629, 635-639</b>
S.D.2.f Apply the Binomial Theorem.	<b>SE/TE: 997-999, 1001-1002, 1030, 1032, 1034, 1035</b>