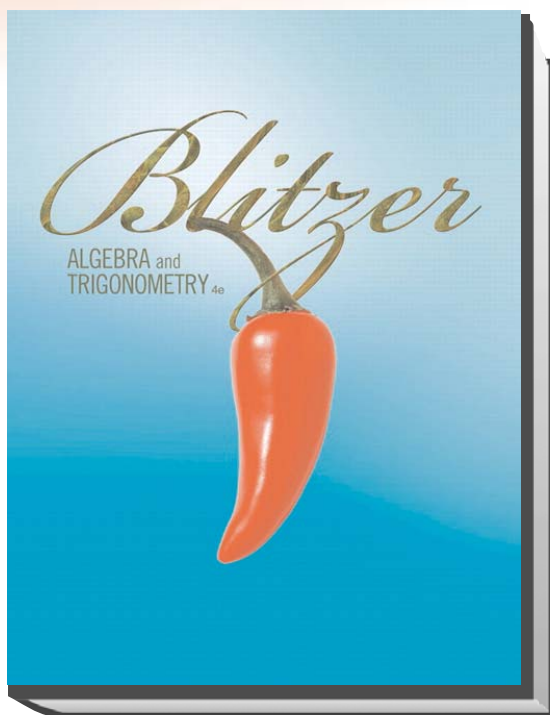


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C O R R E L A T E D T O
North Carolina Essential Standards Draft for
Advanced Functions and Modeling

PEARSON

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Correlated to:

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North Carolina Essential Standards Draft for Advanced Functions and Modeling	Algebra and Trigonometry, 4 th Edition © 2010 (Blitzer)
Advanced Functions and Modeling Essential Standards (3/26/09)	
Advanced Functions and Modeling	
A.D.1 Use a diverse array of functions (logarithmic, piecewise-defined, power, trigonometric, recursively-defined, and polynomial) to model and solve problems.	
A.D.1.a Determine when it is appropriate to use each function.	SE/TE: 242, 466-468, 471-473, 475, 478, 479
A.D.1.b Explain the significance each function has with respect to the data or problem situation being modeled.	SE/TE: 238-239, 319-323, 394-401, 460-469, 591-594
A.D.2 Use multiple representations to analyze trigonometric functions.	
A.D.2.a Define trigonometric functions on the unit circle.	SE/TE: 526-532, 532-534, 535-536, 602, 603-604, 662, 746
A.D.2.b Create and identify transformations with respect to period, amplitude, and vertical and horizontal shifts.	SE/TE: 538-545, 547-553, 554-557, 560-565, 567-570, 591-594, 597, 599-600, 602-604, 662, 746, 888
A.D.2.c Develop and use the law of sines and the law of cosines.	SE/TE: 664-671, 671-675, 676-680, 681-683, 705, 732, 741, 743-744, 966, 1052
S.D.1 Create and use calculator-generated models of linear, polynomial, exponential, trigonometric, power, and logarithmic functions of bivariate data to solve problems.	
S.D.1.a Interpret the constants, coefficients, and bases in the context of the data.	SE/TE: 239, 241-242, 468, 471-472 For additional content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 735-736
S.D.1.b Check models for goodness-of-fit; use the most appropriate model to draw conclusions and make predictions.	SE/TE: 242, 466-468, 471-472, 478, 479 For additional content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 732-736, 737-739, 744, 746
S.D.1.c Evaluate sets of data considering the source and the design of the study.	For content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 681-682, 687-688, 689-692, 740, 742
S.D.1.d Recognize when arguments based on data confuse correlation with causation.	SE/TE: The opportunity to address this standard can be found on the following pages: 242, 466-468 For additional content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 731

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S.D.2 Summarize and analyze univariate data to solve problems.	
S.D.2.a Apply and compare methods of data collection.	For content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 681-682, 689, 740, 742, 745
S.D.2.b Apply statistical principles and methods in sample surveys.	For content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 681-682, 689, 724-725, 728-730, 740, 742, 744, 745
S.D.2.c Determine measures of central tendency and spread.	For content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 692-702, 702-704, 705-710, 710-712, 740-741, 742-743, 745-746
S.D.2.d Recognize, define, and use the normal distribution curve.	For content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 712-725, 727-730, 741, 743, 745
S.D.2.e Interpret graphical displays of univariate data.	For content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 683, 687-688, 689-692, 699, 703, 706, 709, 710-711, 721-723, 726, 729, 742-745
S.D.2.f Compare distributions of univariate data.	For content that meets this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 691, 709, 711, 717-718, 728, 743, 746
S.D.3 Use theoretical and experimental probability to model and solve problems.	
S.D.3.a Use addition and multiplication principles.	SE/TE: 1037-1042, 1042-1044, 1047, 1049, 1050
S.D.3.b Calculate and apply permutations and combinations.	SE/TE: 1012-1016, 1017-1019, 1020-1027, 1027-1030, 1036, 1046, 1049, 1050
S.D.3.c Create and use simulations for probability models.	SE/TE: The opportunity to address this standard can be found on the following pages: 1039, 1049
S.D.3.d Find expected values and determine fairness.	SE/TE: The opportunity to address this standard can be found on the following pages: 1044, For additional opportunities to address this standard, please visit www.prenhall.com/blitzer . Thinking Mathematically, 2nd Edition: Chapter 12: 694, 704
S.D.3.e Identify and use discrete random variables to solve problems.	SE/TE: 683-686, 689-691, 694

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S.D.3.f Apply the Binomial Theorem.	SE/TE: 1012-1016, 1017-1019, 1046, 1048- 1049, 1050, 1051