Algebra 2 Honors - Expectations for Exit Exam

Text Book Information:

Big Ideas Math – Algebra 2   Authors: Ron Larson & Laurie Boswell   ISBN-13: 978-1-60840-840-5
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This Exit Exam will be limited to 90 minutes. Students will be allowed to use a calculator on parts of the test. The calculator cannot have Wi-Fi capabilities (no phones or tablet apps). Calculators with graphing capabilities are prohibited during the graphing section of the test. The exam contains both multiple choice and constructed response items. Partial credit may be earned on some items. You must score 77% or more to pass the exam and be placed into Precalculus Honors for the following school year. Test scores are reported as pass/fail. The test is secure and will not be returned to the student or parent for review.

Content Covered in the Course:

The Troy School District curriculum is based on the Michigan Mathematics Standards. The table below gives a brief description of the topics covered in the Algebra 2 textbook and their correlation to the tested standards. For a detailed explanation of the content expectations, see the complete list of Michigan Mathematics Standards for High School:

http://www.michigan.gov/documents/mde/K-12_MI_Math_Standards_REV_470033_7_550413_7.pdf

The Exit Exam is a comprehensive assessment of the full Troy School District Curriculum and Michigan Mathematics Standards. Students should be prepared to demonstrate their proficiency on all content.

Content Overview		Michigan Standard(s) Correlation
Chapter 1: Linear Functions		
1.1	Parent Functions and Transformations	HSF-BF.B.3
1.2	Transformations of Linear and Absolute Value Functions	HSF-BF.B.3
1.3	Modeling with Linear Functions	HSA-CED.A.2, HSF-IF.C.9, HSF-BF.A.1a, HSF-LE.A.2, HSS-ID.B.6a
1.4	Solving Linear Systems	HSA-CED.A.3, HSA-REI.C.6
Chapter 2: Quadratic Functions		
2.1	Transformations of Quadratic Functions	HSF-IF.C.7c, HSF-BF.B.3
2.2	Characteristics of Quadratic Functions	HSF-IF.B.4, HSF-IF.C.7c, HSF-IF.C.9, HSA-APR.B.3
2.3	Focus of a Parabola	HSF-IF.B.4, HSF-IF.C.7c, HSG-GPE.A.2
2.4	Modeling with Quadratic Equations	HSA-CED.A.2, HSF-IF.B.6, HSF-BF.A.1a, HSS-ID.B.6a

Content Overview

Michigan Standard(s) Correlation

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Chapter 7: Rational Functions	
7.1 Inverse Variation	HSA-CED.A.1, HSA-CED.A.2, HSA-CED.A.3
7.2 Graphing Rational Functions	HSA-APR.D.6, HSF-BF.B.3
7.3 Multiplying and Dividing Rational Expressions	HSA-APR.D.6, HSA-APR.D.7
7.4 Adding and Subtracting Rational Expressions	HSA-APR.D.6, HSA-APR.D.7
7.5 Solving Rational Equations	HSA-CED.A.4, HSA-REI.A.1, HSA-REI.A.2
Chapter 8: Sequences and Series	
8.1 Defining and Using Sequences and Series	HSF-IF.A.3
8.2 Analyzing Arithmetic Sequences and Series	HSF-IF.A.3, HSF-BF.A.2, HSF-LE.A.2
8.3 Analyzing Geometric Sequences and Series	HSA-SSE.B.4, HSF-IF.A.3, HSF-BF.A.2, HSF-LE.A.2
8.4 Finding Sums of Infinite Geometric Series	HSA-SSE.B.4
8.5 Using Recursive Rules with Sequences	HSF-IF.A.3, HSF-BF.A.1a, HSF-BF.A.2
Chapter 9: Trigonometric Ratios and Functions	
9.1 Right Triangle Trigonometry	HSF-TF.A.1, HSF-TF.A.2, HSF-TF.B.5, HSF-TF.C.8
9.2 Angles and Radian Measure	HSF-TF.A.1
9.3 Trigonometric Functions of Any Angle	HSF-TF.A.2
9.4 Graphing Sine and Cosine Functions	HSF-IF.C.7e, HSF-BF.B.3
9.5 Graphing Other Trigonometric Functions	HSF-IF.C.7e, HSF-BF.B.3
9.6 Modeling with Trigonometric Functions	HSF-TF.B.5, HSF-BF.A.1a, HSA-CED.A.2
9.7 Using Trigonometric Identities	HSF-TF.C.8
9.8 Using Sum and Difference Formulas	HSF-TF.C.9
Chapter 10: Probability	
10.1 Sample Spaces and Probability	HSS-CP.A.1
10.2 Independent and Dependent Events	HSS-CP.A.1, HSS-CP.A.2, HSS-CP.A.3, HSS-CP.A.5, HSS-CP.B.6, HSS-CP.B.8
10.3 Two-Way Tables and Probability	HSS-CP.A.4, HSS-CP.A.5
10.4 Probability of Disjoint and Overlapping Events	HSS-CP.A.1, HSS-CP.B.7
10.5 Permutations and Combinations	HSA-APR.C.5, HSS-CP.B.9
10.6 Binomial Distributions	HSS-CP.B.9
Chapter 11: Data Analysis and Statistics	
11.1 Using Normal Distributions	HSS-ID.A.4
11.2 Populations, Samples, and Hypotheses	HSS-IC.A.1, HSS-IC.A.2
11.3 Collecting Data	HSS-IC.A.1, HSS-IC.B.3
11.4 Experimental Design	HSS-IC.A.1, HSS-IC.B.3, HSS-IC.B.6
11.5 Making Inferences from Sample Surveys	HSS-IC.A.2, HSS-IC.B.4
11.6 Making Inferences from Experiments	HSS-IC.A.2, HSS-IC.B.5

Students will also be expected to show proficiency in the Standards for Mathematical Practice:

- Standard 1: Make sense of problems and persevere in solving them

- Standard 2: Reason abstractly and quantitatively

- Standard 3: Construct viable arguments and critique the reasoning of others

- Standard 4: Model with mathematics

- Standard 5: Use appropriate tools strategically

- Standard 6: Attend to precision

- Standard 7: Look for and make use of structure

- Standard 8: Look for and express regularity in repeated reasoning