Louisiana Guide to Implementing Agile Minds
Algebra II

To assist teachers with the implementation of the Agile Minds curriculum for Algebra II, this document provides multiple layers of guidance regarding how Agile Minds lessons correlate with the Louisiana Student Standards for Mathematics (LSSM). Agile Minds is a focused, coherent math curriculum that provides ample instructional guidance for teachers. This Louisiana Guide to Implementing Agile Minds goes a step further to point out places in which teachers may need to make strategic decisions considering student needs and time availability by offering a suggested pacing calendar, highlighting the prerequisite standards and grade level standards by unit, detailing standards by lesson, and showcasing the alignment to the Louisiana Student Standards for Mathematics.

The guidance document is considered a “living” document. We believe that educators will find ways to make improvements to the guidance document as they use it. Please send feedback to STEM@la.gov.

Updated on July 20, 2023

Table of Contents

Suggested Implementation Calendar 3

Standards by Unit 5

Standards by Lesson 10

Louisiana Standards Alignment 16

Acceleration in Mathematics 22

Algebra II Suggested Implementation Calendar

Algebra II	Unit	Approximate Number of Days	Number of Lessons
Week 1	Flex Days	2-3 Days	
Weeks 1-2	Unit 1: Arithmetic and Geometric Sequences and Series	7 Days	6 Lessons and 1 Assessment
Weeks 3-4	Unit 2: Absolute Value Equations and Piecewise Functions	8 Days	7 Lessons and 1 Assessment
Weeks 4-5	Unit 3: Understanding Inverse Relations	8 Days	7 Lessons and 1 Assessment
Weeks 6-7	Unit 4: Transforming Functions	7 Days	6 Lessons and 1 Assessment
Weeks 7-8	Unit 5: Laws of Exponents	6 Days	5 Lessons and 1 Assessment
Weeks 9-10	Unit 6: Square Root Functions and Equations	6 Days	5 Lessons and 1 Assessment
Weeks 10-11	Unit 7: Quadratic and Square Root Inequalities	6 Days	5 Lessons and 1 Assessment
Weeks 11-12	Unit 8: Cubic and Cube Root Functions and Equations	4 Days	3 Lessons and 1 Assessment
Weeks 13-14	Unit 9: Introduction to Polynomial Functions	7 Days	6 Lessons and 1 Assessment
Week 15	Unit 10: Analyzing Polynomial Functions	5 Days	4 Lessons and 1 Assessment
Weeks 16-18	Unit 11: Polynomial Equations	9 Days	8 Lessons and 1 Assessment
Weeks 18-19	Unit 12: Modeling with Inverse and Joint	7 Days	6 Lessons and 1 Assessment

	Variation		
Weeks 19	Flex Days	2-3 Days	
Weeks 20-21	Unit 13: Rational Expressions and Functions	10 Days	9 Lessons and 1 Assessment
Week 22	Unit 14: Rational Equations	5 Days	4 Lessons and 1 Assessment
Weeks 23-24	Unit 15: Exponential Functions	9 Days	8 Lessons and 1 Assessment
Weeks 25-26	Unit 16: Logarithmic Functions	9 Days	8 Lessons and 1 Assessment
Weeks 27-28	Unit 17: Using Logarithms to Solve Equations and Inequalities	6 Days	5 Lessons and 1 Assessment
Week 29	REVIEW / STATE ACT TESTING	1 day	
Weeks 30-31	Unit 18: Equations with More Than Two Unknowns	6 Days	5 Lessons and 1 Assessment
Weeks 31-32	Unit 19: Probability Concepts and the Normal Distribution	8 Days	7 Lessons and 1 Assessment
Week 33	Unit 20: Design and Data Collection in Statistical Studies	5 Days	4 Lessons and 1 Assessment
Weeks 34-35	21: Trigonometric Functions	8 Days	7 Lessons and 1 Assessment
Weeks 35-36	Unit 22: Fitting Functions to Data	7 Days	6 Lessons and 1 Assessment
Week 36	Flex / Final	1 day	

Alignment to Louisiana Student Standards for Mathematics

Focus in the Standards

Not all content at given grades is emphasized equally in the standards. Some clusters require greater emphasis than others based on the depth of ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. More time in these areas is also necessary for students to meet the Louisiana Standards for Mathematical Practices. To say that some things have greater emphasis is not to say that anything in the standards can safely be neglected in instruction. Neglecting material will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade. Students should spend the large majority of their time on the major work on the grade (■). Supporting work (◘) and, where appropriate, additional work (○) can engage students in the major work of the grade.

Algebra II: Standards by Unit					
Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**
A2.A-SSE.B.04 A2.F-BF.A.01.a A2.F-BF.A.02 A2.F-LE.A.02	A2.A-CED.A.01 A2.A-REI.D.11 A2.F-IF.C.07.b	A2.F-BF.B.04.a	A2.F-BF.B.03	A2.N-RN.A.01 A2.N-RN.A.02	A2.A-CED.A.01 A2.A-REI.A.01 A2.A-REI.A.02 A2.A-REI.D.11 A2.F-IF.B.04 A2.F-IF.C.07.b A2.F-BF.B.03
Prerequisite Standards: A1.F-IF.A.03 A1.F-LE.A.02 A1.F-BF.A.01	Prerequisite Standards: A1.A-REI.B.04 A1.A-REI.D.11 A1.F-IF.A.01 A1.F-IF.B.04 A1.F-IF.C.07 A1.F-IF.C.07.a A1.F-IF.C.07.b A1.F-IF.C.08 A1.A-CED.A.01 A1.A-APR.B.03	Prerequisite Standards:	Prerequisite Standards: A1.F-BF.B.03	Prerequisite Standards: 8.EE.A.1 8.EE.A.2	Prerequisite Standards: A1.A-CED.A.01 A1.A-APR.B.03 A1.A-REI.A.01 A1.A-REI.B.04 A1.A-REI.D.11 A1.F-IF.A.01 A1.F-IF.B.04 A1.F-IF.C.07 A1.F-IF.C.08 A1.F-BF.B.03 A1.N-Q.A.01

Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12
A2.A-CED.A.01 A2.A-REI.D.11	A2.A-REI.A.02 A2.F-IF.B.04 A2.F-IF.B.06 A2.F-IF.C.07.b A2.F-BF.B.03	A2.F-IF.B.04 A2.F-IF.B.06 A2.F-IF.C.09 A2.F-BF.A.01.b A2.F-BF.B.03	A2.A-APR.B.03 A2.F-IF.B.04 A2.F-IF.C.07.c	A2.N-CN.A.01 A2.N-CN.A.02 A2.N-CN.C.07 A2.A-SSE.A.02 A2.A-APR.B.02 A2.A-APR.B.03 A2.A-APR.C.04 A2.A-CED.A.01 A2.A-REI.B.04.b	A2.A-CED.A.01 A2.F-IF.B.04
Prerequisite Standards: A1.A-CED.A.01 A1.A-REI.B.04 A1.A-REI.D.11	Prerequisite Standards: A1.N-Q.A.01 A1.A-APR.B.03 A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.B.04 A1.F-IF.B.06 A1.F-IF.C.07 A1.F-IF.C.08 A1.F-BF.B.03	Prerequisite Standards: A1.N-Q.A.01 A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.B.04 A1.F-IF.B.06 A1.F-IF.C.09 A2.F-BF.A.01 A1.F-BF.B.03	Prerequisite Standards: A1.A-SSE.B.03 A1.A-APR.B.03 A1.N-Q.A.01 A1.F-IF.A.01 A1.F-IF.B.04 A1.F-IF.C.07 A1.F-IF.C.08	Prerequisite Standards: 7.EE.A.1 8.EE.A.2 A1.A-SSE.A.01 A1.A-SSE.A.02 A1.A-SSE.B.03.a A1.A-APR.B.03 A1.A-CED.A.01 A1.A-REI.B.04.b A1.F-IF.C.08.a	Prerequisite Standards: A1.N-Q.A.1 A1.A-CED.A.01 A1.A-REI.B.04 A1.F-IF.A.01 A1.F-IF.B.04
Unit 13	**Unit 14**	**Unit 15**	**Unit 16**	**Unit 17**	**Unit 18**
A2.A-APR.D.06 A2.F-IF.B.04	A2.A-CED.A.01 A2.A-REI.A.02	A2.A-SSE.B.03.c A2.F-IF.B.04	A2.F-IF.B.04 A2.F-IF.C.07.e	A2.A-CED.A.01 A2.A-REI.A.01	A2.A-REI.C.06 A2.A-REI.C.07

A2.F-BF.B.03		A2.F-IF.C.07.e A2.F-IF.C.08.b A2.F-BF.B.03 A2.F-LE.A.02 A2.F-LE.B.05	A2.F-BF.B.03	A2.A-REI.D.11 A2.F-LE.A.04	
Prerequisite Standards: 7.NS.A.2 A1.N-Q.A.01 A1.F-IF.A.01 A1.F-IF.B.04 A2.F-BF.B.03	Prerequisite Standards: A1.A-CED.A.01 A1.A-REI.B.04	Prerequisite Standards: A1.N-Q.A.01 A1.A-SSE.B.03 A1.A-APR.B.03 A1.F-IF.A.01 A1.F-IF.B.04 A1.F-IF.C.07 A1.F-IF.C.08 A1.F-BF.B.03 A1.F-LE.A.01 A1.F-LE.A.02 A1.F-LE.A.03 A1.F-LE.B.05	Prerequisite Standards: A1.N-Q.A.01 A1.A-APR.B.03 A1.F-IF.A.01 A1.F-IF.B.04 A1.F-IF.C.07 A1.F-IF.C.08 A1.F-BF.B.03	Prerequisite Standards: A1.A-REI.A.01 A1.A-REI.D.11	Prerequisite Standards: A1.A-REI.C.06
Unit 19	**Unit 20**	**Unit 21**	**Unit 22**		
A2.S-ID.A.04 A2.S-IC.A.02	A2.S-IC.A.01 A2.S-IC.B.03 A2.S-IC.B.04 A2.S-IC.B.05 A2.S-IC.B.06	A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-BF.A.01.a A2.F-BF.B.03 A2.F-TF.A.01	A2.N-Q.A.02 A2.A-SSE.B.03.c A2.F-IF.C.08.b A2.F-BF.A.01.a A2.F-LE.B.05		

		A2.F-TF.A.02 A2.F-TF.B.05 A2.F-TF.C.08	A2.S-ID.B.06.a		
Prerequisite Standards: 6.SP.B.5 7.SP.C.7 A1.S-ID.A.02 GM.S-CP.A.01 GM.S-CP.B.07	Prerequisite Standards: 7.SP.A.2	Prerequisite Standards: A1.N-Q.A.01 A1.A-APR.B.03 A1.F-IF.A.01 A1.F-IF.B.04 A1.F-IF.C.07 A1.F-IF.C.08 A1.F-BF.A.01 A1.F-BF.B.03 GM.G-C.B.05 GM.G-SRT.C.08 GM.G-GPE.A.01	Prerequisite Standards: A1.N-Q.A.01 A1.N-Q.A.02 A1.A-SSE.B.03.c A1.F-IF.C.08 A1.F-BF.A.01 A1.F-LE.B.05 A1.S-ID.B.06.a A1.S-ID.B.06.c A1.S-ID.C.08		

Standards by Lesson

Algebra II: Standards by Lesson	
Unit 1 Lessons	**Standards**
1	A2.F-BF.A.02
2	A2.F-BF.A.01.a A2.F-BF.A.02 A2.F-LE.A.02
3	A2.A-SSE.B.04 A2.F-BF.A.02 A2.F-LE.A.02
4	A2.A-SSE.B.04 A2.F-BF.A.01.a A2.F-BF.A.02 A2.F-LE.A.02
5	A2.A-SSE.B.04 A2.F-BF.A.01.a A2.F-BF.A.02 A2.F-LE.A.02
6	A2.A-SSE.B.04 A2.F-BF.A.01.a A2.F-BF.A.02 A2.F-LE.A.02
7	Summative Assessment

Unit 2 Lessons	Standards
1	A2.F-IF.C.07.b
2	A2.F-IF.C.07.b
3	A2.A-CED.A.01 A2.A-REI.D.11 A2.F-IF.C.07.b
4	A2.A-CED.A.01 A2.A-REI.D.11
5	A2.F-IF.C.07.b
6	A2.F-IF.C.07.b
7	A2.A-CED.A.01 A2.A-REI.D.11
8	Summative Assessment
Unit 3 Lessons	**Standards**
1	A2.F-BF.B.04.a
2	A2.F-BF.B.04.a
3	A2.F-BF.B.04.a
4	A2.F-BF.B.04.a
5	A2.F-BF.B.04.a
6	A2.F-BF.B.04.a
7	A2.F-BF.B.04.a
8	Summative Assessment
Unit 4 Lessons	**Standards**
1	A2.F-BF.B.03
2	A2.F-BF.B.03
3	A2.F-BF.B.03
4	A2.F-BF.B.03
5	A2.F-BF.B.03
6	A2.F-BF.B.03
7	Summative Assessment

Unit 5 Lessons	Standards
1	■ A2.N-RN.A.01 ■ A2.N-RN.A.02
2	■ A2.N-RN.A.01 ■ A2.N-RN.A.02
3	■ A2.N-RN.A.01 ■ A2.N-RN.A.02
4	■ A2.N-RN.A.01 ■ A2.N-RN.A.02
5	■ A2.N-RN.A.01 ■ A2.N-RN.A.02
6	Summative Assessment

Unit 6 Lessons	Standards
1	■ A2.A-REI.A.01 ■ A2.F-IF.B.04 ○ A2.F-BF.B.03
2	▣ A2.A-CED.A.01 ■ A2.A-REI.A.01 ■ A2.A-REI.A.02 ■ A2.F-IF.B.04 ▣ A2.F-IF.C.07.b ○ A2.F-BF.B.03
3	▣ A2.A-CED.A.01 ■ A2.A-REI.A.01 ■ A2.A-REI.A.02 ■ A2.A-REI.D.11 ■ A2.F-IF.B.04 ▣ A2.F-IF.C.07.b ○ A2.F-BF.B.03
4	▣ A2.A-CED.A.01 ■ A2.A-REI.A.01 ■ A2.A-REI.A.02 ■ A2.A-REI.D.11
5	▣ A2.A-CED.A.01 ■ A2.A-REI.A.01 ■ A2.A-REI.A.02 ■ A2.A-REI.D.11 ■ A2.F-IF.B.04 ▣ A2.F-IF.C.07.b ○ A2.F-BF.B.03
6	Summative Assessment

Unit 7 Lessons	Standards
1	▣ A2.A-CED.A.01 ■ A2.A-REI.D.11
2	▣ A2.A-CED.A.01 ■ A2.A-REI.D.11
3	▣ A2.A-CED.A.01 ■ A2.A-REI.D.11
4	▣ A2.A-CED.A.01 ■ A2.A-REI.D.11
5	▣ A2.A-CED.A.01 ■ A2.A-REI.D.11
6	Summative Assessment

Unit 8 Lessons	Standards
1	■ A2.F-IF.B.04 ■ A2.F-IF.B.06 ▣ A2.F-IF.C.07.b
2	■ A2.F-IF.B.04 ▣ A2.F-IF.C.07.b ○ A2.F-BF.B.03
3	■ A2.A-REI.A.02
4	Summative Assessment

Unit 9 Lessons	Standards
1	■ A2.F-IF.B.04
2	■ A2.F-IF.B.04 ▣ A2.F-IF.C.09 ■ A2.F-BF.A.01.b
3	▣ A2.F-IF.C.09 ■ A2.F-BF.A.01.b
4	■ A2.F-IF.B.04
5	■ A2.F-IF.B.04 ■ A2.F-IF.B.06

6	A2.F-IF.B.04 A2.F-IF.C.09 A2.F-BF.A.01.b A2.F-BF.B.03
7	Summative Assessment
Unit 10 Lessons	**Standards**
1	A2.F-IF.B.04
2	A2.F-IF.B.04
3	A2.A-APR.B.03 A2.F-IF.B.04 A2.F-IF.C.07.c
4	A2.A-APR.B.03 A2.F-IF.B.04 A2.F-IF.C.07.c
5	Summative Assessment
Unit 11 Lessons	**Standards**
1	A2.N-CN.C.07 A2.A-APR.C.04 A2.A-REI.B.04.b
2	A2.N-CN.C.07 A2.A-APR.C.04

	A2.A-REI.B.04.b
3	A2.N-CN.A.01 A2.N-CN.C.07 A2.A-APR.B.03 A2.A-REI.B.04.b
4	A2.N-CN.A.01
5	A2.N-CN.A.01 A2.N-CN.A.02 A2.N-CN.C.07 A2.A-SSE.A.02 A2.A-APR.B.02
6	A2.N-CN.A.01 A2.N-CN.A.02 A2.N-CN.C.07 A2.A-SSE.A.02 A2.A-APR.B.02
7	A2.N-CN.A.01 A2.N-CN.A.02 A2.N-CN.C.07 A2.A-SSE.A.02 A2.A-APR.B.02
8	A2.A-APR.C.04 A2.A-CED.A.01 A2.A-REI.B.04.b
9	Summative Assessment
Unit 12 Lessons	**Standards**

1	A2.F-IF.B.04
2	A2.F-IF.B.04
3	A2.A-CED.A.01 A2.F-IF.B.04
4	A2.A-CED.A.01 A2.F-IF.B.04
5	A2.A-CED.A.01 A2.F-IF.B.04
6	A2.A-CED.A.01 A2.F-IF.B.04
7	Summative Assessment
Unit 13 Lessons	**Standards**
1	A2.A-APR.D.06
2	A2.A-APR.D.06
3	A2.A-APR.D.06 A2.F-IF.B.04
4	A2.A-APR.D.06 A2.F-IF.B.04
5	A2.F-BF.B.03
6	A2.A-APR.D.06 A2.F-IF.B.04 A2.F-BF.B.03

7	A2.A-APR.D.06 A2.F-IF.B.04 A2.F-BF.B.03
8	A2.F-IF.B.04
9	A2.F-IF.B.04
10	Summative Assessment
Unit 14 Lessons	**Standards**
1	A2.A-CED.A.01 A2.A-REI.A.02
2	A2.A-CED.A.01 A2.A-REI.A.02
3	A2.A-CED.A.01 A2.A-REI.A.02
4	A2.A-CED.A.01 A2.A-REI.A.02
5	Summative Assessment
Unit 15 Lessons	**Standards**
1	A2.F-LE.A.02 A2.F-LE.B.05
2	A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-BF.B.03 A2.F-LE.B.05
3	A2.F-IF.C.08.b A2.F-LE.A.02 A2.F-LE.B.05
4	A2.A-SSE.B.03.c A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-IF.C.08.b
5	A2.A-SSE.B.03.c A2.F-IF.C.08.b A2.F-LE.A.02 A2.F-LE.B.05
6	A2.A-SSE.B.03.c A2.F-IF.C.08.b A2.F-LE.A.02 A2.F-LE.B.05
7	A2.A-SSE.B.03.c A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-IF.C.08.b A2.F-BF.B.03 A2.F-LE.B.05
8	A2.F-LE.A.02 A2.F-LE.B.05
9	Summative Assessment
Unit 16 Lessons	**Standards**
1	A2.F-IF.B.04 A2.F-IF.C.07.e
2	A2.F-IF.B.04 A2.F-IF.C.07.e
3	A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-BF.B.03
4	A2.F-IF.B.04 A2.F-IF.C.07.e
5	A2.F-IF.B.04 A2.F-IF.C.07.e
6	A2.F-IF.B.04 A2.F-IF.C.07.e
7	A2.F-IF.B.04 A2.F-IF.C.07.e
8	A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-BF.B.03
9	Summative Assessment
Unit 17 Lessons	**Standards**
1	A2.A-CED.A.01 A2.A-REI.D.11
2	A2.A-REI.A.01 A2.F-LE.A.04
3	A2.A-REI.A.01 A2.A-REI.D.11 A2.F-LE.A.04

4	A2.A-REI.A.01 A2.A-REI.D.11 A2.F-LE.A.04
5	A2.A-CED.A.01 A2.A-REI.A.01 A2.A-REI.D.11 A2.F-LE.A.04
6	Summative Assessment

Unit 18 Lessons	Standards
1	A2.A-REI.C.06
2	A2.A-REI.C.06
3	A2.A-REI.C.07
4	A2.A-REI.C.06 A2.A-REI.C.07
5	A2.A-REI.C.06 A2.A-REI.C.07
6	Summative Assessment

Unit 19 Lessons	Standards
1	A2.S-ID.A.04 A2.S-IC.A.02
2	A2.S-ID.A.04 A2.S-IC.A.02
3	A2.S-ID.A.04 A2.S-IC.A.02
4	A2.S-ID.A.04 A2.S-IC.A.02
5	A2.S-ID.A.04 A2.S-IC.A.02
6	A2.S-ID.A.04 A2.S-IC.A.02
7	A2.S-ID.A.04 A2.S-IC.A.02
8	Summative Assessment

Unit 20 Lessons	Standards
1	A2.S-IC.A.01 A2.S-IC.B.03
2	A2.S-IC.A.01 A2.S-IC.B.03 A2.S-IC.B.04
3	A2.S-IC.A.01 A2.S-IC.B.03 A2.S-IC.B.04 A2.S-IC.B.05
4	A2.S-IC.A.01 A2.S-IC.B.03 A2.S-IC.B.04 A2.S-IC.B.05 A2.S-IC.B.06
5	Summative Assessment

Unit 21 Lessons	Standards
1	A2.F-IF.B.04 A2.F-IF.C.07.e
2	A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-TF.A.02
3	A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-TF.C.08
4	A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-BF.B.03
5	A2.F-BF.A.01.a A2.F-TF.A.01 A2.F-TF.B.05
6	A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-BF.B.03 A2.F-TF.B.05
7	A2.F-IF.B.04 A2.F-IF.C.07.e A2.F-BF.B.03 A2.F-TF.B.05
8	Summative Assessment

Unit 22 Lessons	Standards
1	A2.N-Q.A.02

	A2.A-SSE.B.03.c A2.F-IF.C.08.b A2.F-BF.A.01.a A2.F-LE.B.05 A2.S-ID.B.06.a
2	A2.N-Q.A.02 A2.A-SSE.B.03.c A2.F-LE.B.05 A2.S-ID.B.06.a
3	A2.N-Q.A.02 A2.A-SSE.B.03.c A2.F-LE.B.05 A2.S-ID.B.06.a
4	A2.N-Q.A.02 A2.A-SSE.B.03.c A2.F-IF.C.08.b

	A2.F-BF.A.01.a A2.F-LE.B.05 A2.S-ID.B.06.a
5	A2.N-Q.A.02 A2.A-SSE.B.03.c A2.F-IF.C.08.b A2.F-BF.A.01.a A2.F-LE.B.05 A2.S-ID.B.06.a
6	A2.N-Q.A.02 A2.A-SSE.B.03.c A2.F-LE.B.05 A2.S-ID.B.06.a
7	Summative Assessment

Louisiana Alignment		
Standard Code	Standard Language	Aligned Lessons
A2: N-RN.A.1	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})^3 = 5^{(1/3)3} = (5)^{(1/3)(3)}$ to hold, so $(5^{1/3})^3$ must equal 5.	Unit 5
A2: N-RN.A.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.	Unit 5
A2: N-Q.A.2	Define appropriate quantities for the purpose of descriptive modeling. *	Unit 22
A2: N-CN.A.1	Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.	Unit 11
A2: N-CN.A.2	Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.	Unit 11
A2: N-CN.C.7	Solve quadratic equations with real coefficients that have complex solutions.	Unit 11
A2: A-SSE.A.2	Use the structure of an expression to identify ways to rewrite it. *For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, or see $2x^2 + 8x$ as $(2x)(x) + 2x(4)$, thus recognizing it as a polynomial whose terms are products of monomials and the polynomial can be factored as $2x(x+4)$.*	Unit 11
A2: A-SSE.B.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. *	Units 15 and 22
A2: A-SSE.B.3c	Use the properties of exponents to transform expressions for exponential functions. *For example, the expression 1.15^t can be rewritten as $(1.15^{1/12})^{12t} = 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.*	Units 15 and 22

A2: A-SSE.B.4	Apply the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments	Unit 1
A2: A-APR.B.2	Know and apply the Remainder Theorem: For a polynomial p(x) and a number a, the remainder on division by x - a is p(a), so p(a) = 0 if and only if (x - a) is a factor of p(x).	Unit 11
A2: A-APR.B.3	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	Units 10 and 11
A2: A-APR.C.4	Use polynomial identities and use them to describe numerical relationships. For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.	Unit 11
A2: A-APR.D.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), using inspection, long division, or, for the more complicated examples, a computer algebra system.	Unit 13
A2: A-CED.A.1	Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.* *	Units 2, 6, 7, 11, 12, 14, and 17
A2: A-REI.A.1	Explain each step in solving an equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.	Units 6 and 17
A2: A-REI.A.2	Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.	Units 6, 8, and 14
A2: A-REI.B.4	Solve quadratic equations in one variable.	Unit 11
A2: A-REI.B.4b	Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a + bi$ for real number a and b.	Unit 11

A2: A-REI.C.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), limited to systems of at most three equations and three variables. With graphic solutions, systems are limited to two variables.	Unit 18
A2: A-REI.C.7	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line y = -3x and the circle $x^2 + y^2 = 3$.	Unit 18
A2: A-REI.D.11	Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*	Units 2, 6, 7, and 17
A2: F-IF.B.4	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.	Units 6, 8, 9, 10, 12, 13, 15, 16, and 21
A1: F-IF.B.6	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.	Units 8 and 9
A2: F-IF.C.7	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*	Units 2, 6, 8, 10, 15, 16, and 21
A2: F-IF.C.7b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.	Units 2, 6, and 8
A2: F-IF.C.7c	Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.	Unit 10

A2: F-IF.C.7e	Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.	Units 15, 16, and 21
A2: F-IF.C.8	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.	Units 15 and 22
A2: F-IF.C.8b	Use the properties of exponents to interpret expressions for exponential functions. For example, identify percent rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)12^t$, $y = (1.2)^t/10$, and classify them as representing exponential growth or decay.	Units 15 and 22
A2: F-IF.C.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, determine which has the larger maximum.	Unit 9
A2: F-BF.A.1	Write a function that describes a relationship between two quantities.	Units 1, 9, 21, and 22
A2: F-BF.A.1a	Determine an explicit expression, a recursive process, or steps for calculation from a context. *	Units 1, 21, and 22
A2: F-BF.A.1b	Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.	Unit 9
A2: F-BF.A.2	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.	Unit 1
A2: F-BF.B.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\,f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative). find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.	Units 4, 6, 8, 9, 13, 15, 16, and 21
A2: F-BF.B.4	Find inverse functions.	Unit 3

A2: F-BF.B.4a	Solve an equation of the form f(x) = c for a simple function f that has an inverse and write an expression for the inverse. For example, $f(x) = 2x^3$ or $f(x) = (x+1)/(x-1)$ for $x \neq 1$.	Unit 3
A2: F-LE.A.2	Given a graph, a description of a relationship, or two input-output pairs (include reading these from a table), construct linear and exponential functions, including arithmetic and geometric sequences to solve multistep problems.	Units 1 and 15
A2: F-LE.A.4	For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.	Unit 17
A2: F-LE.B.5	Interpret the parameters in a linear or exponential function in terms of a context. *	Units 15 and 22
A2: F-TF.A.1	Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.	Unit 21
A2: F-TF.A.2	Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.	Unit 21
A2: F-TF.B.5	Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.	Unit 21
A2: F-TF.C.8	Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle.	Unit 21
A2: S-ID.A.4	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve	Unit 19
A2: S-ID.B.6	Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. *	Unit 22

A2: S-ID.B.6a	Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize exponential models. *	Unit 22
A2: S-IC.A.1	Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	Unit 20
A2: S-IC.A.2	Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?	Unit 19
A2: S-IC.B.3	Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.	Unit 20
A2: S-IC.B.4	Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.	Unit 20
A2: S-IC.B.5	Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	Unit 20
A2: S-IC.B.6	Evaluate reports based on data.	Unit 20

Acceleration in Mathematics within the context of Agile Minds

Coming Soon!