Louisiana Guide to Implementing Agile Minds
Algebra I

To assist teachers with the implementation of the Agile Minds curriculum for Algebra I, 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 9

Louisiana Standards Alignment 16

Acceleration in Mathematics 22

Algebra I Suggested Implementation Calendar

Algebra I	Unit	Approximate Number of Days	Number of Lessons
Week 1	Flex Days	2-3 Days	
Weeks 1-2	1: Constructing Graphs	5 Days	4 Lessons and 1 Assessment
Weeks 2-3	2: Multiple Representations in the Real World	7 Days	6 Lessons and 1 Assessment
Weeks 4-5	3: Functions	9 Days	8 Lessons and 1 Assessment
Weeks 6-7	4: Rate of Change	9 Days	8 Lessons and 1 Assessment
Weeks 8-9	5: Moving Beyond Slope-Intercept	8 Days	7 Lessons and 1 Assessment
Weeks 9-11	6: Creating Linear Models for Data	9 Days	8 Lessons and 1 Assessment
Weeks 11-12	7: Descriptive Statistics	7 Days	6 Lessons and 1 Assessment
Weeks 12-13	8: Solving Linear Equations and Inequalities	7 Days	6 Lessons and 1 Assessment
Weeks 14-15	9: Absolute Value Functions, Equations, and Inequalities	6 Days	5 Lessons and 1 Assessment
Weeks 15-17	10: Systems of Linear Equations and Inequalities	6 Days	5 Lessons and 1 Assessment
Week 17	LEAP 360 Diagnostic / Midterm	2-3 Days	

Weeks 18-19	11: Other Methods for Solving Systems	8 Days	7 Lessons and 1 Assessment
Weeks 20-21	12: Nonlinear Relationships	9 Days	8 Lessons and 1 Assessment
Weeks 22-23	13: Exponential Functions and Equations	6 Days	5 Lessons and 1 Assessment
Weeks 23-24	14: Arithmetic and Geometric Sequences	7 Days	6 Lessons and 1 Assessment
Weeks 25-26	15: Graphs of Quadratic Functions	8 Days	7 Lessons and 1 Assessment
Weeks 26-28	16: Operations on Polynomials	9 Days	8 Lessons and 1 Assessment
Weeks 28-29	17: Modeling with Quadratic Functions	7 Days	6 Lessons and 1 Assessment
Weeks 30-31	18: Solving Quadratic Equations	8 Days	7 Lessons and 1 Assessment
Week 32	19: The Quadratic Formula	6 Days	5 Lessons and 1 Assessment
Weeks 33-36	LEAP Review / Leap 2025 Test		

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 1: Standards by Unit					
Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**
A1.N-Q.A.01 A1.N-Q.A.02 A1.F-IF.A.01 A1.F-IF.B.05	A1.N-Q.A.01 A1.N-Q.A.03 A1.A-SSE.A.01.a A1.A-SSE.A.01.b A1.A-CED.A.02	A1.A-CED.A.01 A1.A-CED.A.02 A1.A-CED.A.03 A1.A-REI.D.10 A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.A.03 A1.F-IF.B.05 A1.F-IF.C.09 A1.F-BF.A.01.a	A1.F-IF.B.04 A1.F-IF.B.06 A1.F-LE.A.01.b	A1.A-CED.A.02 A1.F-IF.B.04 A1.F-IF.B.06 A1.F-IF.C.07.a A1.F-BF.A.01.a A1.F-BF.B.03 A1.F-LE.A.01.a A1.F-LE.A.01.b A1.F-LE.A.02 A1.F-LE.B.05 A1.S-ID.C.07	A1.F-BF.B.03 A1.S-ID.B.06.a A1.S-ID.B.06.b A1.S-ID.B.06.c A1.S-ID.C.07 A1.S-ID.C.08 A1.S-ID.C.09
Prerequisite Standards: 6.RP.A3 8.F.A.1 8.F.A.2 8.F.A.3	Prerequisite Standards: 6.RP.A3 6.EE.A.2 6.EE.A.3 7.EE.A.1 7.EE.A.2	Prerequisite Standards: 6.EE.A.2 7.EE.B.4 8.EE.B.5 8.EE.C.7 8.EE.C.8 8.F.A.1 8.F.A.2 8.F.A.3 8.F.B.4	Prerequisite Standards: 8.F.A.3 8.F.B.4 8.F.B.5	Prerequisite Standards: 8.EE.B.5 8.EE.C.8 8.F.A.3 8.F.B.4 8.F.B.5 8.SP.A.3	Prerequisite Standards: 8.SP.A.1 8.SP.A.2 8.SP.A.3

Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12
A1.S-ID.A.02 A1.S-ID.A.03 A1.S-ID.B.05	A1.A-CED.A.01 A1.A-CED.A.03 A1.A-CED.A.04 A1.A-REI.A.01 A1.A-REI.B.03 A1.A-REI.D.10 A1.A-REI.D.11 A1.A-REI.D.12	A1.A-CED.A.02 A1.A-REI.D.11 A1.F-IF.B.04 A1.F-IF.C.07.b A1.F-BF.B.03	A1.A-CED.A.03 A1.A-REI.C.06 A1.A-REI.D.12	A1.A-CED.A.03 A1.A-REI.C.05 A1.A-REI.C.06	A1.A-CED.A.02 A1.F-IF.B.05
Prerequisite Standards: 6.SP.A.2 6.SP.B.5 8.SP.A.4	Prerequisite Standards: 7.EE.B.4 8.EE.B.5 8.EE.C.7 8.EE.C 8	Prerequisite Standards: 8.EE.B.5 8.EE.C 8 8.F.A.3 8.F.B.5	Prerequisite Standards: 8.EE.C 8	Prerequisite Standards: 8.EE.C 8	Prerequisite Standards: 8.EE.C 8 8.F.A.3 8.F.B.4

Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
A1.A-CED.A.01 A1.A-CED.A.02 A1.A-SSE.B.03.c A1.F-IF.B.04 A1.F-IF.B.05 A1.F-IF.C.07.e A1.F-BF.A.01.a A1.F-BF.B.03	A1.F-IF.A.03 A1.F-BF.A.1 A1.F-LE.A.2	A1.F-IF.B.04 A1.F-IF.C.07.a A1.F-LE.B.05 A1.F-BF.B.03	A1.A-SSE.A.02 A1.A-APR.A.01	A1.F-IF.B.04 A1.A-SSE.B.03.b A1.F-IF.C.07.a A1.F-IF.C.08.a A1.F-IF.C.09 A1.F-BF.A.01.a A1.F-LE.B.05 A1.S-ID.B.06.a	A1.A-CED.A.01 A1.A-REI.B.04.a A1.A-REI.B.04.b A1.A-REI.D.11 A1.A-SSE.B.03.a A1.A-APR.B.03

A1.F-LE.A.01.a A1.F-LE.A.01.c A1.F-LE.A.02 A1.F-LE.A.03 A1.F-LE.B. 05				A1.F-BF.B.03	
Prerequisite Standards: 6.EE.A.3 7.EE.A 1 7.EE.B.4 8.EE.A 1 8.EE.B.5 8.EE.C.7 8.EE.C 8 8.F.A.3 8.F.B.4 8.F.B.5	Prerequisite Standards: 8.F.B.4	Prerequisite Standards: 8.EE.B.5 8.F.A.3 8.F.B.5	Prerequisite Standards: 6.EE.A.3 6.EE.A.4 7.EE.A 1 8.EE.A.1	Prerequisite Standards: 6.EE.A.3 7.EE.A 1 8.EE.A.1 8.EE.B.5 8.F.A.3 8.F.B.4 8.F.B.5 8.SP.A.1 8.SP.A.2 8.SP.A.3	Prerequisite Standards: 6.EE.A.3 7.EE.A 1 7.EE.B.4 8.EE.A.2 8.EE.C.7 8.EE.C.8
Unit 19					
A1.A-REI.B.04.a A1.A-REI.B.04.b A1.N-RN.B.3					
Prerequisite Standards: 7.EE.A 1 8.EE.A.2 8.NS.A.1					

Standards by Lesson

Algebra 1: Standards by Lesson	
Unit 1 Lessons	**Standards**
1	A1.F-IF.A.01 A1.F-IF.B.05
2	A1.F-IF.A.01 A1.F-IF.B.05
3	A1.N-Q.A.01 A1.N-Q.A.02
4	A1.F-IF.A.01 A1.F-IF.B.05 A1.N-Q.A.01 A1.N-Q.A.02
5	Summative Assessment
Unit 2 Lessons	**Standards**
1	A1.A-SSE.A.01.a A1.A-SSE.A.01.b
2	A1.A-SSE.A.01.a A1.A-SSE.A.01.b A1.N-Q.A.01 A1.N-Q.A.03
3	A1.A-SSE.A.01.b A1.A-CED.A.02 A1.N-Q.A.01
4	A1.A-SSE.A.01.b A1.A-CED.A.02 A1.N-Q.A.01
5	A1.A-SSE.A.01.b A1.A-CED.A.02 A1.N-Q.A.01
6	A1.A-SSE.A.01.a A1.A-SSE.A.01.b A1.N-Q.A.01 A1.N-Q.A.03
7	Summative Assessment
Unit 3 Lessons	**Standards**
1	A1.A-CED.A.01 A1.A-CED.A.02 A1.A-CED.A.03 A1.F-IF.A.01
2	A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.A.03
3	A1.A-CED.A.03
	A1.A-REI.D.10 A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.A.03 A1.F-IF.B.05
4	A1.A-CED.A.03 A1.A-REI.D.10 A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.A.03 A1.F-IF.B.05 A1.F-IF.C.09
5	A1.A-CED.A.01 A1.A-CED.A.02 A1.A-CED.A.03 A1.A-REI.D.10 A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.A.03 A1.F-IF.B.05 A1.F-IF.C.09 A1.F-BF.A.01.a
6	A1.A-CED.A.01 A1.A-CED.A.02 A1.A-CED.A.03 A1.A-REI.D.10 A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.A.03 A1.F-IF.B.05 A1.F-IF.C.09 A1.F-BF.A.01.a

7	A1.A-CED.A.01 A1.A-CED.A.02 A1.A-CED.A.03 A1.A-REI.D.10 A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.A.03 A1.F-IF.B.05 A1.F-IF.C.09 A1.F-BF.A.01.a
8	A1.A-CED.A.01 A1.A-CED.A.02 A1.A-CED.A.03 A1.A-REI.D.10 A1.F-IF.A.01 A1.F-IF.A.02 A1.F-IF.A.03 A1.F-IF.B.05 A1.F-IF.C.09 A1.F-BF.A.01.a
9	Summative Assessment
Unit 4 Lessons	**Standards**
1	A1.F-IF.B.04 A1.F-IF.B.06 A1.F-LE.A.01.b
2	A1.F-IF.B.04 A1.F-IF.B.06 A1.F-LE.A.01.b
3	A1.F-IF.B.04 A1.F-IF.B.06 A1.F-LE.A.01.b
4	A1.F-IF.B.04 A1.F-IF.B.06 A1.F-LE.A.01.b
5	A1.F-IF.B.04 A1.F-IF.B.06 A1.F-LE.A.01.b
6	A1.F-IF.B.04 A1.F-IF.B.06 A1.F-LE.A.01.b
7	A1.F-IF.B.04 A1.F-IF.B.06 A1.F-LE.A.01.b
8	A1.F-IF.B.04 A1.F-IF.B.06 A1.F-LE.A.01.b
9	Summative Assessment
Unit 5 Lessons	**Standards**
1	A1.A-CED.A.02 A1.F-IF.B.04 A1.F-IF.C.07.a A1.S-ID.C.07 A1.F-LE.A.02 A1.F-LE.B.05
2	A1.A-CED.A.02 A1.F-IF.B.04 A1.F-IF.C.07.a A1.S-ID.C.07 A1.F-LE.A.02 A1.F-LE.B.05
3	A1.A-CED.A.02 A1.F-IF.B.04 A1.F-IF.B.06 A1.F-IF.C.07.a A1.S-ID.C.07 A1.F-LE.A.01.b A1.F-LE.A.02 A1.F-LE.B.05
4	A1.A-CED.A.02 A1.F-IF.B.04 A1.F-IF.B.06 A1.F-IF.C.07.a A1.S-ID.C.07 A1.F-BF.A.01.a A1.F-LE.A.01.b A1.F-LE.A.02 A1.F-LE.B.05
5	A1.A-CED.A.02 A1.F-IF.B.04 A1.F-IF.C.07.a A1.S-ID.C.07 A1.F-LE.A.01.b A1.F-LE.B.05 A1.F-BF.B.03
6	A1.A-CED.A.02 A1.F-IF.B.04 A1.F-IF.B.06 A1.F-IF.C.07.a A1.S-ID.C.07 A1.F-LE.A.01.b A1.F-LE.A.02 A1.F-LE.B.05
7	A1.F-IF.B.04 A1.F-IF.B.06 A1.S-ID.C.07 A1.F-BF.A.01.a A1.F-LE.A.01.a A1.F-LE.A.01.b A1.F-LE.A.02 A1.F-LE.B.05

8	Summative Assessment
Unit 6 Lessons	**Standards**
1	A1.S-ID.C.07 A1.S-ID.B.06.b
2	A1.S-ID.C.07 A1.S-ID.B.06.a A1.S-ID.B.06.b A1.F-BF.B.03
3	A1.S-ID.C.07 A1.S-ID.C.08 A1.S-ID.C.09 A1.S-ID.B.06.a A1.S-ID.B.06.b A1.S-ID.B.06.c
4	A1.S-ID.C.07 A1.S-ID.C.08 A1.S-ID.B.06.a A1.S-ID.B.06.b A1.S-ID.B.06.c
5	A1.S-ID.B.06.a A1.S-ID.B.06.b A1.S-ID.B.06.c A1.F-BF.B.03
6	A1.S-ID.C.07 A1.S-ID.C.08 A1.S-ID.C.09 A1.S-ID.B.06.a A1.S-ID.B.06.b

	A1.S-ID.B.06.c
7	A1.S-ID.B.06.a A1.S-ID.B.06.b A1.S-ID.B.06.c
8	Summative Assessment
Unit 7 Lessons	**Standards**
1	A1.S-ID.A.02 A1.S-ID.A.03
2	A1.S-ID.A.02 A1.S-ID.A.03
3	A1.S-ID.A.02 A1.S-ID.A.03
4	A1.S-ID.A.02 A1.S-ID.A.03 A1.S-ID.B.05
5	A1.S-ID.A.02 A1.S-ID.A.03 A1.S-ID.B.05
6	A1.S-ID.A.02 A1.S-ID.A.03 A1.S-ID.B.05
7	Summative Assessment
Unit 8 Lessons	**Standards**

1	A1.A-CED.A.01 A1.A-REI.A.01 A1.A-REI.D.10
2	A1.A-CED.A.03 A1.A-CED.A.04 A1.A-REI.A.01 A1.A-REI.B.03 A1.A-REI.D.10
3	A1.A-CED.A.01 A1.A-CED.A.03 A1.A-CED.A.04 A1.A-REI.A.01 A1.A-REI.B.03 A1.A-REI.D.10
4	A1.A-REI.B.03 A1.A-REI.D.11 A1.A-REI.D.12
5	A1.A-REI.B.03 A1.A-REI.D.11 A1.A-REI.D.12
6	A1.A-CED.A.01 A1.A-CED.A.03 A1.A-REI.D.11 A1.A-REI.D.12
7	Summative Assessment
Unit 9 Lessons	**Standards**

1	■ A1.A-CED.A.02 ■ A1.A-REI.D.11 ◘ A1.F-IF.C.07.b
2	■ A1.A-CED.A.02 ■ A1.F-IF.B.04 ○ A1.F-BF.B.03
3	■ A1.A-CED.A.02 ■ A1.A-REI.D.11 ◘ A1.F-IF.C.07.b
4	■ A1.A-REI.D.11
5	■ A1.A-CED.A.02 ■ A1.A-REI.D.11
6	Summative Assessment
Unit 10 Lessons	**Standards**
1	■ A1.A-CED.A.03 ○ A1.A-REI.C.06
2	■ A1.A-CED.A.03 ○ A1.A-REI.C.06
3	■ A1.A-CED.A.03 ○ A1.A-REI.C.06
4	○ A1.A-REI.C.06 ■ A1.A-REI.D.12

5	○ A1.A-REI.C.06 ■ A1.A-REI.D.12
6	Summative Assessment
Unit 11 Lessons	**Standards**
1	○ A1.A-REI.C.06
2	■ A1.A-CED.A.03 ○ A1.A-REI.C.06
3	○ A1.A-REI.C.06
4	○ A1.A-REI.C.06
5	■ A1.A-CED.A.03 ○ A1.A-REI.C.06
6	○ A1.A-REI.C.05
7	■ A1.A-CED.A.03 ○ A1.A-REI.C.06
8	Summative Assessment
Unit 12 Lessons	**Standards**
1	■ A1.A-CED.A.02

2	■ A1.A-CED.A.02 ■ A1.F-IF.B.05
3	■ A1.A-CED.A.02
4	■ A1.A-CED.A.02 ■ A1.F-IF.B.05
5	■ A1.A-CED.A.02
6	■ A1.A-CED.A.02
7	■ A1.A-CED.A.02 ■ A1.F-IF.B.05
8	■ A1.A-CED.A.02 ■ A1.F-IF.B.05
9	Summative Assessment
Unit 13 Lessons	**Standards**
1	■ A1.F-IF.B.04 ◘ A1.F-IF.C.07.b ○ A1.F-BF.B.03 ◘ A1.F-LE.A.01.a ◘ A1.F-LE.A.01.c ◘ A1.F-LE.A.03
2	■ A1.A-CED.A.01 ■ A1.A-CED.A.02 ■ A1.F-IF.B.04 ■ A1.F-IF.B.05 ◘ A1.F-BF.A.01.a ◘ A1.F-LE.A.02 ◘ A1.F-LE.B. 05
3	■ A1.A-CED.A.01

	A1.A-CED.A.02 A1.F-IF.B.04 A1.F-IF.B.05 A1.F-BF.A.01.a A1.F-LE.A.01.c A1.F-LE.A.02 A1.F-LE.B. 05
4	A1.F-IF.B.04 A1.F-IF.B.05 A1.F-LE.A.01.a A1.F-LE.A.01.c A1.F-LE.A.03 A1.F-LE.B. 05 A1.A-SSE.B.03.c
5	A1.F-IF.B.04 A1.F-IF.B.05 A1.F-LE.A.01.a A1.F-LE.A.01.c A1.F-LE.A.03 A1.F-LE.B. 05 A1.A-SSE.B.03.c
6	Summative Assessment
Unit 14 Lessons	**Standards**
1	A1.F-IF.A.03
2	A1.F-IF.A.03 A1.F-BF.A.1 A1.F-LE.A.2
3	A1.F-IF.A.03 A1.F-BF.A.1 A1.F-LE.A.2
4	A1.F-IF.A.03 A1.F-BF.A.1 A1.F-LE.A.2
5	A1.F-IF.A.03 A1.F-BF.A.1 A1.F-LE.A.2
6	A1.F-IF.A.03 A1.F-BF.A.1 A1.F-LE.A.2
7	Summative Assessment
Unit 15 Lessons	**Standards**
1	A1.F-IF.B.04 A1.F-IF.C.07.a
2	A1.F-IF.B.04 A1.F-IF.C.07.a A1.F-LE.B.05 A1.F-BF.B.03
3	A1.F-IF.B.04 A1.F-IF.C.07.a A1.F-BF.B.03
4	A1.F-IF.B.04 A1.F-IF.C.07.a
5	A1.F-IF.B.04 A1.F-IF.C.07.a A1.F-LE.B.05 A1.F-BF.B.03
6	A1.F-IF.B.04 A1.F-IF.C.07.a A1.F-LE.B.05 A1.F-BF.B.03
7	A1.F-IF.B.04 A1.F-IF.C.07.a A1.F-LE.B.05
8	Summative Assessment
Unit 16 Lessons	**Standards**
1	A1.A-SSE.A.02 A1.A-APR.A.01
2	A1.A-APR.A.01
3	A1.A-APR.A.01
4	A1.A-SSE.A.02
5	A1.A-SSE.A.02
6	A1.A-SSE.A.02
7	A1.A-SSE.A.02 A1.A-APR.A.01
8	A1.A-SSE.A.02 A1.A-APR.A.01
9	Summative Assessment
Unit 17	**Standards**

Lessons	
1	■ A1.F-IF.B.04 ◘ A1.F-IF.C.09 ○ A1.F-BF.B.03 ◘ A1.F-LE.B.05
2	■ A1.F-IF.B.04 ◘ A1.F-IF.C.09 ◘ A1.S-ID.B.06.a
3	◘ A1.A-SSE.B.03.b ■ A1.F-IF.B.04 ◘ A1.F-IF.C.07.a ◘ A1.F-IF.C.08.a ○ A1.F-BF.B.03 ◘ A1.F-LE.B.05
4	◘ A1.A-SSE.B.03.b ■ A1.F-IF.B.04 ◘ A1.F-IF.C.07.a ◘ A1.F-IF.C.08.a ◘ A1.F-IF.C.09 ○ A1.F-BF.B.03 ◘ A1.F-LE.B.05
5	◘ A1.F-IF.C.09 ◘ A1.F-BF.A.01.a ◘ A1.S-ID.B.06.a
6	◘ A1.A-SSE.B.03.b ◘ A1.F-IF.C.08.a ◘ A1.F-IF.C.09 ◘ A1.F-BF.A.01.a ◘ A1.F-LE.B.05 ◘ A1.S-ID.B.06.a
7	Summative Assessment
Unit 18 Lessons	**Standards**
1	■ A1.A-REI.B.04.b ■ A1.A-REI.D.11
2	■ A1.A-REI.B.04.b ◘ A1.A-SSE.B.03.a ◘ A1.A-APR.B.03
3	■ A1.A-REI.B.04.a ■ A1.A-REI.D.11 ◘ A1.A-APR.B.03
4	■ A1.A-CED.A.01 ■ A1.A-REI.B.04.b ■ A1.A-REI.D.11 ◘ A1.A-SSE.B.03.a ◘ A1.A-APR.B.03
5	■ A1.A-REI.B.04.a ■ A1.A-REI.B.04.b
6	■ A1.A-CED.A.01 ■ A1.A-REI.B.04.a ■ A1.A-REI.B.04.b ■ A1.A-REI.D.11 ◘ A1.A-SSE.B.03.a ◘ A1.A-APR.B.03
7	■ A1.A-CED.A.01 ■ A1.A-REI.B.04.a
	■ A1.A-REI.B.04.b ■ A1.A-REI.D.11 ◘ A1.A-SSE.B.03.a ◘ A1.A-APR.B.03
8	Summative Assessment
Unit 19 Lessons	**Standards**
1	○ A1.N-RN.B.3
2	○ A1.N-RN.B.3
3	■ A1.A-REI.B.04.a ■ A1.A-REI.B.04.b
4	■ A1.A-REI.B.04.b
5	■ A1.A-REI.B.04.a ■ A1.A-REI.B.04.b ○ A1.N-RN.B.3
6	Summative Assessment

Louisiana Alignment		
Standard Code	Standard Language	Aligned Lessons
A1: N-RN.B.3	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	Unit 19
A1: N-Q.A.1	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. *	Units 1 and 2
A1: N-Q.A.2	Define appropriate quantities for the purpose of descriptive modeling. *	Unit 1
A1: N-Q.A.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. *	Unit 2
A1: A-SSE.A.1	Interpret expressions that represent a quantity in terms of its context. *	Unit 2
A1: A-SSE.A.1a	Interpret parts of an expression, such as terms, factors, and coefficients. *	Unit 2
A1: A-SSE.A.1b	Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P.* *	Unit 2
A1: 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 16
A1: 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 13, 17, and 18

A1: A-SSE.B.3a	Factor a quadratic expression to reveal the zeros of the function it defines.*	Unit 18
A1: A-SSE.B.3b	Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.*	Unit 17
A1: A-SSE.B.3c	Use the properties of exponents to transform expressions for exponential functions emphasizing integer exponents. *For example, the growth of bacteria can be modeled by either* $f(t) = 3^{(t+2)}$ *or* $g(t) = 9(3^t)$ *because the expression* $3^{(t+2)}$ *can be rewritten as* $(3^t)(3^2) = 9(3^t)$.*	Unit 13
A1: A-APR.A.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	Unit 16
A1: A-APR.B.3	Identify zeros of quadratic functions, and use the zeros to sketch a graph of the function defined by the polynomial.	Unit 18
A1: A-CED.A.1	Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear, quadratic, and exponential functions.**	Units 3, 8, 13, and 18
A1: A-CED.A.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.*	Units 2, 3, 5, 9, 12, and 13
A1: A-CED.A.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. *For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.**	Units 3, 8, 10, and 11
A1: A-CED.A.4	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. *For example, rearrange Ohm's law* $V = IR$ *to highlight resistance* R.*	Unit 8
A1: A-REI.A.1	Explain each step in solving a simple 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.	Unit 8

A1: A-REI.B.3	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	Unit 8
A1: A-REI.B.4	Solve quadratic equations in one variable.	Units 18 and 19
A1: A-REI.B.4a	Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.	Units 18 and 19
A1: 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 "no real solution. *	Units 18 and 19
A1: A-REI.C.5	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.	Unit 11
A1: A-REI.C.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	Units 10 and 11
A1: A-REI.D.10	Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).	Units 3 and 8
A1: 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, piecewise linear (to include absolute value), and exponential functions. *	Units 8, 9, and 18
A1: A-REI.D.12	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	Units 8 and 12

A1: F-IF.A.1	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If *f* is a function and *x* is an element of its domain, then *f*(*x*) denotes the output of *f* corresponding to the input *x*. The graph of*f* is the graph of the equation *y* = *f*(*x*).	Units 1 and 3
A1: F-IF.A.2	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	Unit 3
A1: F-IF.A.3	Recognize that sequences are functions whose domain is a subset of the integers. Relate arithmetic sequences to linear functions and geometric sequences to exponential functions.	Units 3 and 14
A1: F-IF.B.4	For linear, piecewise linear (to include absolute value), quadratic, and exponential functions that model 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; and end behavior*. *	Units 4, 5, 9, 13, 15, and 17
A1: F-IF.B.5	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. *For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.* *	Units 1, 3, 12, and 13
A1: F-IF.B.6	Calculate and interpret the average rate of change of a linear, quadratic, piecewise linear (to include absolute value), and exponential function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph. *	Unit 4
A1: 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 5, 9, 13, 15, and 17
A1: F-IF.C.7a	Graph linear and quadratic functions and show intercepts, maxima, and minima. *	Units 5, 15, and 17
A1: F-IF.C.7b	Graph piecewise linear (to include absolute value) and exponential functions. *	Unit 9

A1: 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.	Unit 17
A1: F-IF.C.8a	Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.	Unit 17
A1: F-IF.C.9	Compare properties of two functions (linear, quadratic, piecewise linear [to include absolute value] or exponential) 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*.	Units 3 and 17
A1: F-BF.A.1	Write a linear, quadratic, or exponential function that describes a relationship between two quantities. *	Units 3, 5, 13, 14, and 17
A1: F-BF.A.1a	Determine an explicit expression, a recursive process, or steps for calculation from a context. *	Units 3, 5, 13, and 17
A1: 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). Without technology, find the value of k given the graphs of linear and quadratic functions. With technology, experiment with cases and illustrate an explanation of the effects on the graph that include cases where $f(x)$ is a linear, quadratic, piecewise linear (to include absolute value) or exponential function.	Units 5, 6, 9, 13, 15, and 17
A1: F-LE.A.1	Distinguish between situations that can be modeled with linear functions and with exponential functions. *	Units 4, 5, and 13
A1: F-LE.A.1a	Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals. *	Units 5 and 13
A1: F-LE.A.1b	Recognize situations in which one quantity changes at a constant rate per unit interval relative to another. *	Units 4 and 5
A1: F-LE.A.1c	Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval	Unit 13

	relative to another. *	
A1: F-LE.A.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). *	Units 5, 13, and 14
A1: F-LE.A.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function. *	Unit 13
A1: F-LE.B.5	Interpret the parameters in a linear or exponential function in terms of a context. *	Units 5, 13, 15, and 17
A1: S-ID.A.2	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets. *	Unit 7
A1: S-ID.A.3	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers). *	Unit 7
A1: S-ID.B.5	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data. *	Unit 7
A1: S-ID.B.6	Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. *	Units 6 and 17
A1: 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 linear and quadratic models. *	Unit 6 and 17
A1: S-ID.B.6b	Informally assess the fit of a function by plotting and analyzing residuals. *	Unit 6
A1: S-ID.B.6c	Fit a linear function for a scatter plot that suggests a linear association. *	Unit 6
A1: S-ID.C.7	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data. *	Units 5 and 6

A1: S-ID.C.8	Compute (using technology) and interpret the correlation coefficient of a linear fit. *	Unit 6
A1: S-ID.C.9	Distinguish between correlation and causation. *	Unit 6

Acceleration in Mathematics within the context of Agile Minds

Coming Soon!