Pacing Guide for *Algebra 2: Advanced Algebra*

Mastery vs Pacing

Math-U-See is built on the concept of student mastery. In upper-level math, mastery means that the student can both show what they know and say what they know regarding the lesson objectives. Instructors and students are encouraged to take the time they need to achieve mastery.

Because mastery is individual, pacing is a challenge to construct and predict.

How do we bring these two seemingly opposed approaches together?

While mastery is the core of the curriculum, we understand that instructors and students need some guidance and assurance that they are progressing at a reasonable pace to meet their goals.

We have developed this Pacing Guide for *Algebra 2: Advanced Algebra* to help instructors and students use learning sessions to stay on track to reach their curriculum goals.

The Pacing Guide:

- Defines learning sessions.
- Gives examples of how learning sessions might relate to lessons.
- Applies pacing to a sample calendar for Unit 1.
- Provides sample course pacing.
- Advises how to adapt your student's pacing.

Learning Sessions

An average 16-year-old's ability to focus ranges from 32 to 50 minutes.
Focus time differs from attention span, which only lasts seconds, even for adults!

What is a learning session?

A learning session is a block of student time, focused on mastering curriculum content.

For *Algebra 2: Advanced Algebra*:

- A learning session is **45 minutes of focused learning.**
- It will likely take **2–4 learning sessions to complete a lesson.**
- Learning sessions are not equal to days of the week.
- Learning sessions are not equal to parts of lessons, because lessons vary in length.

Why use learning sessions?

In *Algebra 2: Advanced Algebra*, lesson length varies based on:

- The complexity of the lesson objectives.
- The amount of content required to cover the lesson objectives.
- Your student's comfort with and mastery of the lesson objectives.

By using learning sessions, student learning is separated from the structure of the curriculum. This separation encourages instructors and students to focus on mastery rather than a schedule.

Where in a lesson should your student stop each day?

They should stop when they complete a learning session (~45 minutes of focus time).

You are encouraged to discuss the concept of learning sessions and expectations with your student.

Learning Sessions and Lessons

While learning sessions do not equate to lessons or lesson parts, we have provided some examples of what learning sessions might look like in a short and a long lesson. These examples are simply guidelines. Your student's experience may be different.

<table>
<tr><th>Example A
2 learning sessions</th><th>Short Lesson
(2 Explore topics)</th><th>Example B
3 learning sessions</th></tr>
<tr><td rowspan="4">Learning Session 1</td><td>Objectives/Why?/Warm Up</td><td rowspan="3">Learning Session 1</td></tr>
<tr><td>Explore 1</td></tr>
<tr><td>Explore 2</td></tr>
<tr><td>Practice 1</td><td rowspan="4">Learning Session 2</td></tr>
<tr><td rowspan="4">Learning Session 2</td><td>More to Explore (optional)</td></tr>
<tr><td>Practice 2 (optional)</td></tr>
<tr><td>Mastery Check</td></tr>
<tr><td>Targeted Review or Test</td><td>Learning Session 3</td></tr>
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<table>
<tr><th>Example C
3 learning sessions</th><th>Long Lesson
(4 Explore topics)</th><th>Example D
4 learning sessions</th></tr>
<tr><td rowspan="4">Learning Session 1</td><td>Objectives/Why?/Warm Up</td><td rowspan="3">Learning Session 1</td></tr>
<tr><td>Explore 1</td></tr>
<tr><td>Explore 2</td></tr>
<tr><td>Explore 3</td><td rowspan="4">Learning Session 2</td></tr>
<tr><td rowspan="4">Learning Session 2</td><td>Explore 4</td></tr>
<tr><td>Practice 1</td></tr>
<tr><td>More to Explore (optional)</td></tr>
<tr><td>Practice 2 (optional)</td><td rowspan="2">Learning Session 3</td></tr>
<tr><td rowspan="2">Learning Session 3</td><td>Mastery Check</td></tr>
<tr><td>Targeted Review or Test</td><td>Learning Session 4</td></tr>
</table>

Learning Sessions and Units

We can make reasonable predictions about unit pacing based on what we know about learning sessions and lessons. On the following page is an example of how Unit 1 could look on a calendar. Your student's experience may be different.

You can create your own calendar based on your curriculum goals. Then, you can use it to gauge milestones and adapt as needed.

Sample Unit 1 Pacing Calendar (~32 learning sessions, 1 learning session/weekday)

	Monday Learning Session*	Tuesday Learning Session	Wednesday Learning Session	Thursday Learning Session	Friday Learning Session
Week 1	**Lesson 1** Warm Up Explore**	**Lesson 1** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)	**Lesson 1** Targeted Review	**Lesson 2** Warm Up Explore	**Lesson 2** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)
Week 2	**Lessons 1 and 2** Test	**Lesson 3** Warm Up Explore	**Lesson 3** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)	**Lesson 3** Targeted Review	**Lesson 4** Warm Up Explore
Week 3	**Lesson 4** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)	**Lessons 3 and 4** Test	**Lesson 5** Warm Up Explore	**Lesson 5** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)	**Lesson 5** Targeted Review
Week 4	**Lesson 6** Warm Up Explore	**Lesson 6** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)	**Lessons 5 and 6** Test	**Lesson 7** Warm Up Explore	**Lesson 7** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)
Week 5	**Lesson 7** Targeted Review	**Lesson 8** Warm Up Explore	**Lesson 8** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)	**Lessons 7 and 8** Test	**Lesson 9** Warm Up Explore
Week 6	**Lesson 9** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)	**Lesson 9** Targeted Review	**Lesson 10** Warm Up Explore	**Lesson 10** Practice 1 Mastery Check Practice 2 (opt) More to Explore (opt)	**Lessons 9 and 10** Test
Week 7	**Unit 1 Review**	**Unit 1 Test**			

**Learning sessions are ~45 minutes of focus. ** Explore sections vary in length from lesson to lesson.*

Course Pacing

This sample course pacing chart:

- Shows how the curriculum can be completed in approximately 180 to 208 learning sessions.
- Sample A averages 5 learning sessions per 2 lessons.
- Sample B averages 3 learning sessions per 1 lesson.
- Includes 1 learning session per test.
- Includes 1 review session prior to the unit tests, midterm, and final.

Course Pacing Samples

	Approximate Learning Sessions			Approximate Learning Sessions	
	Sample A	**Sample B**		**Sample A**	**Sample B**
Unit 1 10 Lessons 5 lesson tests 1 review for unit test 1 unit test	**32**	**37**	**Unit 2** 12 lessons 6 lesson tests 1 review for unit test 1 unit test	**38**	**43**
Unit 3 8 lessons 4 lesson tests 1 review for unit test 1 unit test 1 review for midterm 1 midterm	**28**	**32**	**Unit 4** 6 lessons 3 lesson tests 1 review for unit test 1 unit test	**20**	**23**
Unit 5 8 lessons 4 lesson tests 1 review for unit test 1 unit test	**26**	**31**	**Unit 6** 11 lessons 5 lesson tests 1 review for unit test 1 unit test 1 review for final 1 final	**36**	**42**
Total Learning Sessions for *Algebra 2: Advanced Algebra*:				**180**	**208**

How to Adapt Pacing

Above all, keep in mind that mastery is unique to each student. You will need to balance mastery and pacing based on your individual goals.

What can you do if you feel you are falling behind?

Your student may move through some lessons quickly, but need to take more time in others. That is expected.

It is also common for the first few lessons to take longer as students adapt to the structure of the lessons. Typically, student pacing speed picks up after the first few lessons.

If your student consistently requires more than four learning sessions to complete a lesson, don't panic. Your student is mastering advanced algebraic concepts, and that is a great thing!

Here are some ideas to get on track if you feel your student is missing milestones:

- **Reduce the amount of curriculum** you want to complete. For example, if you don't need to meet standards for probabilities and statistics, you can skip Unit 6.
- **Extend the calendar time** you've allotted for the course. For example, if you planned to complete the curriculum from September 1st to June 1st, consider extending your calendar to June 15th.
- **Skip optional items**, particularly in lessons that your student quickly masters. For example, if your student flawlessly completes Practice 1 and the Mastery Check, forgo Practice 2 and More to Explore.
- **Assign Targeted Reviews outside of the learning sessions.** For example, have your student do a learning session and then add the Targeted Review at another time.
- Occasionally, **double-up on learning sessions** on days that suit your student's overall schedule. For example, your student can do a math learning session in the morning and a second learning session later in the day. Do this sparingly, and only if your student has the capacity for it.

How To Guide

Algebra 2: Advanced Algebra is a comprehensive, standards-based curriculum designed to prepare students for higher-level learning, regardless of their post-secondary education and career goals.

This course is about more than formulas and computations. It encourages and empowers students to develop and use critical thinking and problem-solving skills as they pursue mastery.

To find out how to get started with the course, see the **How To Guide** on the course Overview page.