MODULE 1, TOPIC 1 PACING GUIDE

150-Day Pacing

1 Thinking Proportionally

TOPIC 1: Circles and Ratios

1 DAY PACING = 45-MINUTE SESSION

TEKS Mathematical Process Standards: 7.1A, 7.1B, 7.1C, 7.1D, 7.1E, 7.1F, 7.1G

ELPS: 1.C, 1.E, 1.H, 2.D, 2.E, 2.I, 3.E, 4.E, 4.F, 4.G, 4.H, 5.B

Topic Pacing: 10 Days

Lesson	Lesson Title	Highlights	TEKS*	Pacing*
	Introduction to the Problem-Solving Model and Learning Resources	Students reflect on learning a new skill and the variety of ways they learn. The problem-solving model, TEKS mathematical process standards, and the Academic Glossary help students complete a problem-solving activity. Students reflect on and summarize the problem-solving process. Since the intent of this lesson is to introduce the problem-solving model and review the TEKS mathematical process standards, the focus is on process not content. Students will need access to the Academic Glossary, Problem-Solving Model Graphic Organizer, Problem-Solving Questions to Ask, and TEKs mathematical process standards which are located in the Course Guide. These materials should always be available to students throughout the course. **Materials Needed:** (located in the Course Guide) Academic Glossary, Problem-Solving Model Graphic Organizer, Problem-Solving Model Questions to Ask, TEKS Mathematical Process Standards	7.6D	**0**
1	Exploring the Ratio of Circle Circumference to Diameter	Students explore the relationship between the distance around a circle and the distance across a circle. They learn the terms *circumference*, *diameter*, and *radius*. Students use hands-on tools to measure the distances and compare the ratio of the circumference to the length of the diameter. They then use a compass to create their own circles and realize that for every circle the ratio of circumference to diameter is pi. Students practice solving for the diameter or the circumference in problems. **Materials Needed:** Centimeter Rulers, String, Compasses, Calculators with π Key, Circles (located at the end of the lesson)	7.5B 7.8C **7.9B**	2
2	Area of Circles	Students explore the area of a circle in terms of its circumference. They cut a circle into sectors and fit the sectors together to form a parallelogram. The parallelogram helps students see the area of a circle in relation to its circumference: $A = \left(\frac{1}{2}C\right)r$. Students derive the area for a circle and then solve problems using the formulas for the circumference and area of circles. **Materials Needed:** Scissors, Calculators with a π Key, Problem-Solving Model Graphic Organizer, Circles Area Cutouts (located at the end of the lesson)	7.4B 7.8C **7.9B**	2

*Bold TEKS = Readiness Standard; Bold Pacing = Reduced Number of Days

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Lesson	Lesson Title	Highlights	TEKS*	Pacing*
3	**Solving Area and Circumference Problems**	Students use the area of a circle formula and the circumference formula to solve for unknown measurements in problem situations. Some of the situations are problems composed of more than one figure, and some of the situations include shaded and non-shaded regions. Students then determine whether to use the circumference or area formula to solve problems involving circles. **Materials Needed:** Problem-Solving Model Graphic Organizer	**7.9B** **7.9C**	2
End of Topic Assessment				1
Learning Individually with Skills Practice *Schedule these days strategically throughout the topic to support student learning.*				3

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✪ *This activity highlights a key term or concept that is essential to the objectives of the lesson.*

Day 1	Day 2	Day 3	Day 4	Day 5
TEKS: 7.5B, 7.8C, **7.9B**			TEKS: 7.4B, 7.8C, **7.9B**	
LESSON 1 Exploring the Ratio of Circle Circumference to Diameter GETTING STARTED ✪ ACTIVITY 1 ✪ ACTIVITY 2 ✪	**LESSON 1** continued ACTIVITY 3 ✪ TALK THE TALK ✪	**LEARNING INDIVIDUALLY** Skills Practice *This is a suggested placement. Move based on student data and individual needs.*	**LESSON 2** Area of Circles GETTING STARTED ✪ ACTIVITY 1 ✪	**LESSON 2** continued ACTIVITY 2 ✪ ACTIVITY 3 ✪ TALK THE TALK
Day 6	**Day 7**	**Day 8**	**Day 9**	**Day 10**
	TEKS: **7.9B, 7.9C**			
LEARNING INDIVIDUALLY Skills Practice *This is a suggested placement. Move based on student data and individual needs.*	**LESSON 3** Solving Area and Circumference Problems GETTING STARTED ✪ ACTIVITY 1 ✪ ACTIVITY 2 ✪	**LESSON 3** continued ACTIVITY 3 ✪ TALK THE TALK	**LEARNING INDIVIDUALLY** Skills Practice *This is a suggested placement. Move based on student data and individual needs.*	**END OF TOPIC ASSESSMENT**

*Bold TEKS = Readiness Standard

How can you incorporate Skills Practice with students?

There are three Learning Individually days scheduled within this topic. The placement of these days within the topic is flexible. The intent is to distribute spaced and interleaved practice throughout a topic and throughout the year. It is not necessary for students to complete all Skills Practice for the topic and different students may complete different problem sets. You should use data to strategically assign problem sets aligned to individual student needs. You should analyze student responses from the following embedded assessment opportunities to help assess individual needs: Essential Questions, Talk the Talks, Student Self-Reflections, and End of Topic Assessments. For students who are building their proficiency, you can assign problem sets to target specific skills. For students who have demonstrated proficiency, there are extension problems of varied levels of challenge.

How can you identify whether students are ready for new learning?

The Prepare section of the Lesson Assignments and the Spaced Practice set of Skills Practice can serve as diagnostic tools. Depending on available time, you can assign the Prepare section of the Lesson Assignments as homework or as a warm-up to identify students' prior knowledge for the upcoming lessons activities. You can also use the Spaced Practice sets of Skills Practice to analyze individual students' level of proficiency on standards from previous topics.