1 Thinking Proportionally

Topic 3: Proportionality

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

Topic Pacing: 14 Days

Lesson	Lesson Title	Highlights	TEKS*	Pacing**
1	**How Does Your Garden Grow?** Proportional Relationships	Students explore tables and graphs that illustrate proportional relationships. First, students review equivalent ratios and that the graphs of equivalent ratios form straight lines that pass through the origin. They are then given three sets of scenarios, equations, and graphs to match, using any strategy. Each group illustrates a different type of relationship: linear and proportional, linear and non-proportional, or non-linear. Students classify the groups of representations as linear and non-linear and use tables of values to classify the linear relationships as proportional or as non-proportional. They summarize the relationships between the terms *linear relationship*, *proportional relationship*, and *equivalent ratios*. Students are then given three new situations to analyze. They create tables of values and graphs and determine if a proportional relationship exists between two quantities. Finally, the term *direct variation* is introduced and explored using multiple representations.	**7.4A** 7.4C	3
Suggested Placement of Learning Individually with Skills Practice or MATHia				1
2	**Complying with Title IX** Constant of Proportionality	Students learn how to use equations to represent proportional relationships. Students write constants of proportionality based on the direction of the proportional relationship. They then use a scenario to set up a proportion and write two different equations for the scenario, depending on the direction of the proportional relationship. Students identify and interpret the constant of proportionality in the context of a scenario and solve problems using the equations that represent the proportional relationship. Next, students consider an additional situation in which the constant of proportionality and the corresponding equation depend on the question asked. They use the constants of proportionality to write equations, express the equations in terms of proportional relationships, and generalize the equation for proportional relationships. Students then practice using the constant of proportionality to solve for unknown quantities.	**7.4A** 7.4C **7.4D**	**2**
Suggested Placement of Learning Individually with Skills Practice or MATHia				1
OMIT	Mid-Topic Assessment		OMIT	**0**

Texas Grade 7: Module 1, Topic 3 Pacing Guide

150-Day Pacing

TEXAS MATH SOLUTION

Lesson	Lesson Title	Highlights	TEKS*	Pacing**
3	**Fish-Inches** Identifying the Constant of Proportionality in Graphs	In this lesson, students analyze real-world and mathematical situations, both proportional and non-proportional, represented on graphs and then identify the constant of proportionality when appropriate. Students write equations to represent the situations from the graphs. Throughout the lesson, students interpret the meaning of points on graphs in terms of a proportional relationship, including the meaning of (1, *y*) and (0, 0).	**7.4A** 7.4C **7.4D**	2
Suggested Placement of Learning Individually with Skills Practice or MATHia				1
4	**Minding Your Ps and Qs** Constant of Proportionality in Multiple Representations	Students use proportional relationships to create equivalent multiple representations, such as diagrams, equations, tables, and graphs of the situation. A proportional relationship may initially be expressed using only words, a table of values, an equation, or a graph. For example, given only the information that "*q* varies directly with *p*," students will write an equation, complete a table of values, determine the constant of proportionality, construct a graph from the table of values, and create a scenario to fit the graph.	**7.4A** 7.4C	**2**
Suggested Placement of Learning Individually with Skills Practice or MATHia				1
End of Topic Assessment				1

Texas Grade 7: Module 1, Topic 3 Pacing Guide

150-Day Pacing

TEXAS MATH SOLUTION

1 Day Pacing = 45-minute Session

✱ This activity highlights a key term or concept that is essential to the learning goals of the lesson.

Day 1	Day 2	Day 3	Day 4	Day 5
TEKS: **7.4A**, 7.4C **LESSON 1** **How Does Your Garden Grow?** GETTING STARTED ✱ ACTIVITY 1	**LESSON 1** continued ACTIVITY 2 ✱ ACTIVITY 3 ✱	**LESSON 1** continued ACTIVITY 4 ✱ TALK THE TALK ✱	**LEARNING INDIVIDUALLY** Skills Practice OR MATHia	TEKS: **7.4A**, 7.4C, **7.4D** **LESSON 2** **Complying with Title IX** GETTING STARTED ACTIVITY 1 ✱ ACTIVITY 2 ✱
Day 6	**Day 7**	**Day 8**	**Day 9**	**Day 10**
LESSON 2 continued ACTIVITY 3 ✱ ACTIVITY 4 ✱ TALK THE TALK	**LEARNING INDIVIDUALLY** Skills Practice OR MATHia	TEKS: **7.4A**, 7.4C, **7.4D** **LESSON 3** **Fish-Inches** GETTING STARTED ✱ ACTIVITY 1 ✱	**LESSON 3** continued ACTIVITY 2 ✱ ACTIVITY 3 ✱ TALK THE TALK	**LEARNING INDIVIDUALLY** Skills Practice OR MATHia
Day 11	**Day 12**	**Day 13**	**Day 14**	
TEKS: **7.4A**, 7.4C **LESSON 4** **Minding Your Ps and Qs** GETTING STARTED ACTIVITY 1 ✱ ACTIVITY 2 ✱ ACTIVITY 3 ✱	**LESSON 4** continued ACTIVITY 4 ✱ ACTIVITY 5 ✱ TALK THE TALK	**LEARNING INDIVIDUALLY** Skills Practice OR MATHia	**END OF TOPIC ASSESSMENT**	