Topic A:

Proportional Relationships

7.RP.A.2a

Focus Standard:	7.RP.A.2a	Recognize and represent proportional relationships between quantities. a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
Instructional Days:	6	
Lesson 1:	An Experience in Relationships as Measuring Rate (P)[1]	
Lesson 2:	Proportional Relationships (P)	
Lessons 3–4:	Identifying Proportional and Non-Proportional Relationships in Tables (P)	
Lessons 5–6:	Identifying Proportional and Non-Proportional Relationships in Graphs (E)	

In Lesson 1 of Topic A, students are reintroduced to the meanings of value of a ratio, equivalent ratios, rate, and unit rate through a collaborative work task where they record their rates choosing an appropriate unit of rate measurement. In Lesson 2, students conceptualize that two quantities are proportional to each other when there exists a constant such that each measure in the first quantity multiplied by this constant gives the corresponding measure in the second quantity (**7.RP.A.2**). They then apply this basic understanding in Lessons 3–6 by examining situations to decide whether two quantities are in a proportional or non-proportional relationship by first checking for a constant multiple between measures of the two quantities, when given a table, and then by graphing on a coordinate plane. Students recognize that the graph of a proportional relationship must be a straight line through the origin (**7.RP.A.2a**).

[1] Lesson Structure Key: **P**-Problem Set Lesson, **M**-Modeling Cycle Lesson, **E**-Exploration Lesson, **S**-Socratic Lesson