Topic B:

Linear Equations in Two Variables and Their Graphs

8.EE.B.5

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| Focus Standard: | 8.EE.B.5 | Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*  |
| Instructional Days: | 5 |  |
| Lesson 10: | A Critical Look at Proportional Relationships (S)[[1]](#footnote-1) |
| Lesson 11:  | Constant Rate (P) |
| Lesson 12: | Linear Equations in Two Variables (E) |
| Lesson 13: | The Graph of a Linear Equation in Two Variables (S) |
| Lesson 14: | The Graph of a Linear Equation―Horizontal and Vertical Lines (S) |

Topic B begins with students working with proportional relationships related to average speed and constant speed. In Lesson 10, students use information that is organized in the form of a table to write linear equations. In Lesson 11, students learn how to apply the concept of constant rate to a variety of contexts requiring two variables (**8.EE.B.5**). Lesson 12 introduces students to the standard form of an equation in two variables. At this point, students use a table to help them find and organize solutions to a linear equation in two variables. Students then use the information from the table to begin graphing solutions on a coordinate plane. In Lesson 13, students begin to question whether or not the graph of a linear equation is a line, as opposed to something that is curved. Lesson 14 presents students with equations in standard form,
$ax+by=c$, where $a=0$ or $b=0$, which produces lines that are either vertical or horizontal.

1. Lesson Structure Key: **P**-Problem Set Lesson, **M**-Modeling Cycle Lesson, **E-**Exploration Lesson, **S-**Socratic Lesson [↑](#footnote-ref-1)