Connecting Proportionality and Constant Speed to Linearity (Slides 42-47)

Resource Video 5

The last slides of this module connect the concepts of proportionality and constant rate of change to linearity. Students are asked to reason about contextual situations, describe the co-variation of the situations and formalize them using formulas and graphs.

As a teacher, you should be sure these conversations focus on the quantities involved and that students explain their reasoning about answers given. You should also connect the work done on these slides to what students already know about linearity – y = mx + b. This is an opportunity to build meaning into the formula most students know. M, for example, is the constant rate of change between the quantities (or the ratio of the changes), not simply 'rise over run'. B is not just a y-intercept, but actually has a meaning in the context of a problem.

The goal is to help students connect the different ideas of math they have learned into one cohesive understanding about the concepts and how they are related.