

Recognizing Proportional Situations (Slides 21-25)

Resource Video 3

The purpose of the first two slides is to formalize students' understanding of proportionality. These slides provide students with a new context in which to reason about it – a mixture problem. Students should share their reasoning in both their small groups and in whole class discussion. As the teacher, you should push students to verbalize explanations about both the scaling and constant ratio/multiple formulations of proportionality, again not worrying so much about the names but about the ways of reasoning.

The next slide then gives students the opportunity students to create their own definitions of proportionality based on these discussions. You should encourage multiple people to share their thoughts and then have class discussion on whether others agree or disagree with the definitions. Be sure to hold students accountable to speak with meaning and to give reasoning for their thinking.

These newly formed class definitions can then be used for the next slides, which ask students to explain whether or not given situations and quantities are proportional. This is generally harder for students because they must have a good understanding of proportionality to make a strong argument. As an extension, you can ask students what would have to be changed about the situations so that the quantities that are originally proportional to one another are not and vice versa. This gives fluency to understanding the differences between proportionality and linearity, which continue to arise throughout the module.