



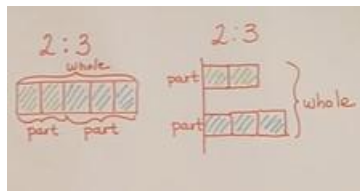
Singapore Math with Dawn Swartz

Lesson 12: Comparison Bar Modeling for Ratio Word Problems

Outline:

Comparison Bar Modeling for Ratio Word Problems

- The units needed are the sum of all the parts in the ratio.
- These problems can use both part-whole bar models and comparison bar models.



- **Question 1 (6:15)**
 - At some point in fifth or sixth grade you can begin to write $7u$ rather than 7 units in the expression 7 units = 35.
 - **Check the answer with the students.**
 - Students have already learned to do much of the problem solving process for ratio problems in previous lessons.
- **Question 2 (14:25)**
 - Draw a longer bar for ratio problems because you need room to see all of the pieces included in the ratio.
 - Shade different parts of the bar model to correspond to the numbers indicated in the ratio.
 - **Start with the known units. Work from what is known to what is unknown and what you are looking for.**
- **Question 3 (23:20)**
 - Talk through the problem to determine what kind of bar model to use.
 - Even when students can do some computation in their head, follow through with showing the process so they can show it when the numbers are harder.
- **Question 4 (28:40)**
 - You might want to show the children what is happening in this problem. You could demonstrate this concretely.
- **Question 5 (33:40)**
 - Example questions: How many bars do we need? What are the bars for?



- You can help the students to keep the pieces straight by writing the ratio numbers above the item that they correspond to throughout the problem.
- One of the objectives is to identify the unknown quantity.