



FIGURE 3.16

Of course, I feel strongly about the representational strategies being used in problem solving. Once students have a good “feel” for the problem from visualizing the situation, they should use one of the other representational strategies to work on it. In other words, they should try to represent the problem in a way that will help them to either understand it better, to understand it in another way, or to lead them to a good solution path. Zawojewski and Lesh (2003, 325–27) suggest that when students do math problem solving in small groups and work on rich problems they are using their representations to communicate their mental images to others. When students create and share multiple representations of the same problem or situation, they are continuing to keep their thinking alive. Multiple representations also may provide deeper, more elaborate understandings of the underlying mathematics, and fresh, new insights into the problem.

While using this image from Arthur Hyde’s “Comprehending Math; Adapting Reading Strategies to Teach Mathematics, K-6” (2006), we remind ourselves of the visualizations / representations that teachers and students should include in their thinking and explicit teaching.