

CHAPTER 9: Mathematicians Use Intuition

This chapter has a fair amount of novel content for teachers. Intuition has historically played a minor role in teacher education and training, as well as in math class. My hope is its novelty leads to good surprises, new thinking, joy, and discovery. This chapter is intended to be a conversation opener, not the final word.

Discussion Questions

Pages 209–211 Discuss the opening passage about intuition. What caught your ear? Any surprises?

Page 214 Discuss Jen's approach to inserting exploration before the worksheet. She is able to stay on her pacing guide even with these insertions. What do you think about that idea?

Pages 216–219 Read the description of Alejandro's revision carefully. How might you model this thought process and teach it to your students?

Page 218 Study Figure 9.6. Discuss it with your colleagues, in your notebook, or on your blog. I'd love to hear your thoughts at tjzager.com (Chapter 9).

Pages 213–221 Reflect on Jen's use of manipulatives, and yours. Discuss how we might be more thoughtful about their use in classrooms.

Pages 221–224 Can you relate to what the teachers experienced with the roll of quarters problem? Do you see the same thing happen with your students?

Activities

Pages 238–242 **Developing Intuition in Students Who Need It Most**

Read Andrew Gael's comments with your full team—general and special education and paraprofessionals. Plan how you might use these comments to start a productive conversation.

Calls to Action

Page 221 **Inserting Intuition**

Try shuffling your lesson components, like Jen did, to make room for intuition building in an upcoming lesson. Don't expect it to go perfectly—Jen has a lot of experience with this technique! After you teach, reflect on what you noticed and thought. What might you try next time? Share with your colleagues, and, if you like, at tjzager.com (Chapter 9).

Pages 224–226 **Questioning**

Choose seven questions—one from each category—and write them somewhere you'll see them while you teach. Try using them in your teaching for a week. What did you notice? Share with your team and also at tjzager.com (Chapter 9).



CHAPTER 9: Mathematicians Use Intuition (continued)**Pages 230–239 Estimation 180**

Teach a series of challenges from *Estimation 180*. How did it go? Share your reactions with your colleagues and at tjzager.com (Chapter 9).

Page 239 Estimation 180 on the Number Line

Once *Estimation 180* is a familiar routine, try it with Joe Schwartz's open number line. What did you learn? It was likely challenging for your students. Try it a few times and see how things evolve. Talk with one another and let me know how it goes at tjzager.com (Chapter 9).

Additional Resources

At stenhouse.com/becomingmathteacher and at tjzager.com, you'll find a collection of supplemental resources that may come in handy for further thinking and discussion. I keep the links fresh, so the contents will change, but you will certainly find:

- All the web resources from this chapter
- Blog posts from Joe Schwartz and Kristin Gray about *Estimation 180*
- Andrew Gael's blog so you can read more deeply about his work

