

Focus Questions: Chapter 2

1. Turn to Dawn's case 6 and study Andrew. Why does it make sense to him to have "fifty-ten" follow 59? What is right in his thinking? What is he missing?
2. In Danielle's case 7, the students come up with many ways to write one hundred ninety-five. What sense do you see in each one?
3. What ideas about the number system does the activity in Donna's case 9 highlight?
4. Look over your work for questions 1, 2, and 3. How is the work of these students related to practice 7, look for and make use of structure? What mathematical structures are the students calling upon?
5. Make a number line of your own from 0 to 10,000 and place 375 on it. Discuss how you decided where to mark the 375. Now place the following additional numbers on your number line:
 - (a) 25
 - (b) 2,376
 - (c) 7,832
6. Compare Shaquille's and Chris's number lines in case 10. How are they alike? How are they different? What ideas about the number system do you see in these representations? What is not seen?
7. Explain Olivia's multiple number-line strategy in case 10. What ideas about the number system do you see in her representations?
8. In Susie's case 11, she asks her students how many thousands there are in 437,812.
 - (a) Trace the thinking of the students as they discuss this. What mathematical ideas about the place-value system are coming up for them? What are they missing?
 - (b) In line 476 of case 11, the students use a calculator to determine that there are 437.812 thousands in 437,812. What does that mean?