2.NBT Peyton and Presley Discuss Addition

Alignments to Content Standards: 2.NBT.B.9 2.NBT.B.7

Task

Peyton said, “I can solve 47 + 65” and he showed this strategy.

47 + 65 = 100 + 12 = 112

Presley said, “That doesn’t make sense. Explain why that works.”

a. Draw a diagram to show Peyton’s thinking.

b. Explain Peyton’s strategy and why it works.

IM Commentary

This purpose of this task is to support students in developing an understanding of a place value strategy for adding numbers. The goal is not for students to use the strategy to solve, but to understand the strategy. By using a representation to visualize the abstract notation, students will make sense of the strategy, adding tens with tens and ones with ones. The task may also support students in MP3, construct viable arguments and critique the reasoning of others and MP6, attend to Precision.

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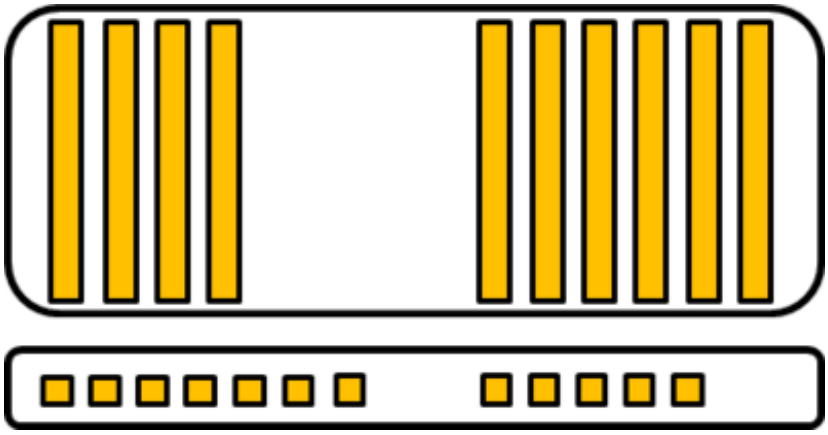
Solution

a. One representation of Peyton's thinking could be shown with base ten blocks.



There are other possible representations.

b. Peyton started by adding the tens, 40+60=100. Next he added the ones, 7+5=12. Then he added the tens and ones together 100+12=112. This strategy works because Peyton is using a place value strategy, adding tens and tens and ones and ones.

*For additional reading: Progressions for the Common Core Standards in Math, K-5 Number and Operations in Base Ten. http://commoncoretools.me/wp-content/uploads/2011/04/ccss_progression_nbt_2011_04_073_corrected2.pdf