

FIGURING OUT  
**Fluency**  
ADDITION & SUBTRACTION  
With Whole Numbers

A Classroom  
Companion

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**CORWIN** Mathematics

*Thank you*

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Please enjoy this complimentary excerpt from Figuring Out Fluency - Addition and Subtraction With Whole Numbers, by John J. SanGiovanni, Jennifer M. Bay-Williams and Rosalba Serrano.

**LEARN MORE** about this title!

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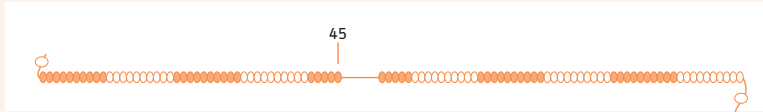


## ACTIVITY 1.3 BEADED NUMBER LINES

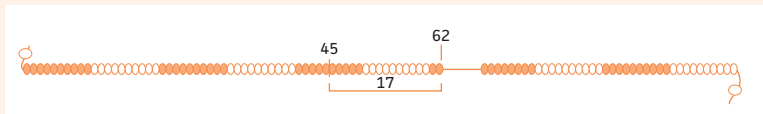
One way to develop the understanding of Count On and Count Back is to represent it with a 100 beaded number line and connect the work to a written number line. In this activity, students partition the beads to represent the first addend. Then students would shift beads to count on the amount of the second addend. This creates the sum. Students then record their work on a number line. Consider  $45 + 17$ . Students move 45 beads to the left.

### TEACHING TAKEAWAY

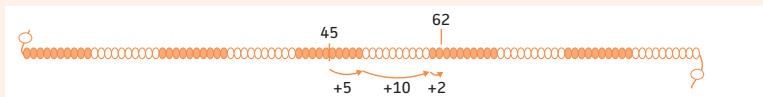
It can be helpful for students to use clothespins to keep the amount they're working with separate from the unused beads.



Then, students count on 17 more before counting a total.

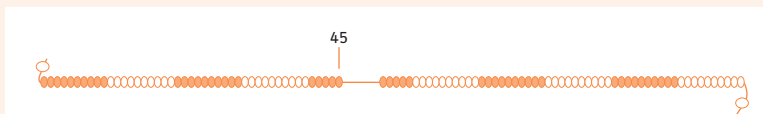


After using the bead counters, students record their thinking on a bead counter recording sheet.

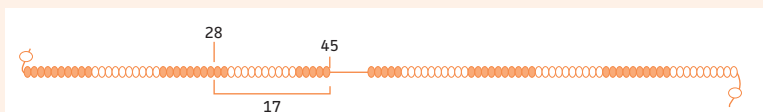


To count back, students slide 45 beads to the left to represent the minuend. A clothespin is handy here for keeping the minuend separate from the rest of the beads. The following example shows how this would unfold with  $45 - 17$ .

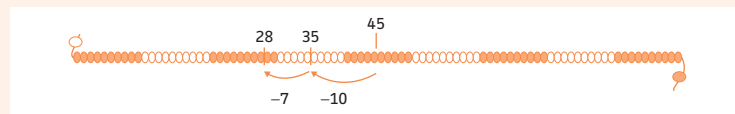
Students separate 45 from the entire set of beads.



Then, students shift the beads (Count Back) that represent the subtrahend. This will create the final difference. Students then record their work on a number line.



After completing the work, students record their thinking on a bead counter number line.



# 100 Beaded Number Line

