

## Assessment 4: Conservation of Number

*Materials:* 20 beans

*Recording:* Check yes or no

*Suggested Questions and Procedures:*

- Make two horizontal rows of objects (approximately 10). The counters in each row are placed in one-to-one correspondence.  
"Are there the same number of beans in each row?"



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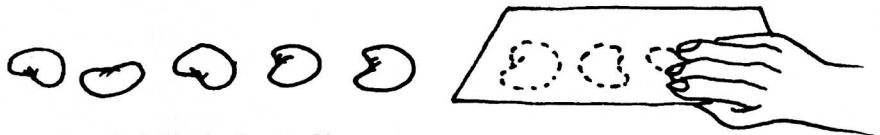
## Assessment 5: Counting Backwards

*Materials:* 7-20 beans and a piece of paper or cardboard (to cover the beans)

*Recording:* Circle quantities completed correctly.

*Suggested Questions and Procedures:*

- Ask the child, "Place seven beans in a horizontal line on the table." If necessary, direct with your hand the horizontal position. (Child places seven beans on the table.)
- Confirm the total. "How many beans did you line up?"
- Cover one bean with a piece of paper or tagboard and say, "Now how many are there?" (Child responds without having to count the beans.)



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## Assessment 6: Estimation of Quantities

*Materials:* 3 small identical jars of objects labeled A, B, C...

*Recording:* Record answer and explanation.

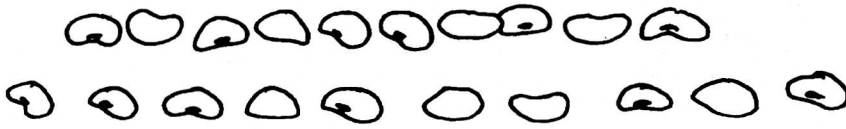
*Suggested Questions and Procedures:*

- "How many beans do you think are in jar A?"
- "If there are (*child's answer*) beans in jar A, then how many beans do you think are in jar B?"
- "If there are (*child's answer*) beans in jar B, then how many beans do you think are in jar C?"



*Observations:* How a child decides on an answer is the key to this assessment. Ask the child to explain why and/or how he or she found his or her answer.

- If he or she agrees there are, then spread one line of objects out to make a longer line.  
Ask the same question, "Are there the same number of objects in each row?"



- Ask the child to explain his or her answer to be sure it's not just a lucky guess.  
"Why do you think (*the rows are the same / the rows are different*)?"

- Continue to cover the beans until they are all gone.
- Increase the amount of beans and repeat the assessment as long as the child is comfortable. If the child shows that he or she is having difficulty, start over with fewer beans.

*Observation:* Does the child count-on to find the new total of beans or does he or she start over each time?

*Extension:* Check to see if the child can count backwards by more than one object at a time.

*Variation:* See MTW, p. 113.  
NL, p. 3.10

