

**Cognitively Guided Instruction K-2 - Student Interview**

Child's First Name \_\_\_\_\_

Age \_\_\_\_\_

This handout is available for download at: <https://www.cgimath-tlc.org/materials-from-our-cgi-pd-sessions> Audio files of problems in Spanish at: <https://www.cgimath-tlc.org/k2-student-interview-problems-in-spanish>

Introductory Problems	
Directions	Problem and Teacher Notes
<p>Pose to all children.</p> <p>If child miscounts but models correctly, move on.</p> <p>If child can't get started, ask, "is there anything here that you could use to show me 12 jellybeans?"</p> <p><i>"Puedes usar algo que ves aquí para mostrar me 12 dulces?"</i></p> <p>If child makes or draws a set of 12, reread the problem.</p>	<p>A. <b>(Separate Result Unknown)</b> Alana had 12 jellybeans. She ate 4 jellybeans. How many jellybeans does Alana have now?</p> <p>Alana tenía 12 dulces. Ella se comió 4. ¿Cuántos dulces tiene Alana ahora?</p>
<p>Pose to all children.</p> <p>If child miscounts but models correctly, move on.</p> <p>If child can't get started ask, "could you draw a picture of 4 bags?"</p> <p><i>"Puedes dibujar 4 bolsas?"</i></p> <p>If child draws a picture, re-read the problem.</p>	<p>B. <b>(Multiplication)</b> Annie has 3 bags of marbles with 4 marbles in each bag. How many marbles does Annie have?</p> <p>Annie tiene 3 bolsas de canicas con 4 canicas en cada bolsa. ¿Cuántas canicas tiene Annie ahora?</p>

Introductory Problems	
Directions	Problem and Teacher Notes
<p>Pose to all children who didn't need additional prompts to solve at least one problem A or B.</p> <p>Move on if the child struggles, this is a difficult problem for many young children.</p>	<p>C. <b>(Join Change Unknown)</b> Carl has 9 stickers. How many more stickers would he need to get to have 14 stickers all together?</p> <p>Carl tiene 9 calcomanías<sup>1</sup>. ¿Cuántas calcomanías más necesitará para tener 14 en total?</p>

After watching the child solve these three problems you will have an idea of what numbers to use in the problems on the rest of the interview. Don't worry too much about providing the perfect number choices. If the problem was too easy, ask the problem again with higher numbers. If the child struggles too much, change to lower numbers. This interview was written to use with K-2 children throughout the year.

If the child seems overwhelmed and/or distressed by these problems move to the counting tasks. You could come back to solving problems if you think the child may be able to solve them after warming up to you.

<sup>1</sup> If possible, check with a bilingual child on which term they prefer to use when speaking in Spanish: calcomanías, stickers, gominas, or monitas

<b>Main Problems</b>	
<b>Directions</b>	<b>Problem and Teacher Notes</b>
<p>Feel free to pose more than once with different numbers.</p> <p>If student uses a counting strategy, does he/she count on from the first number or the larger number?</p> <p>Again consider moving the counting tasks for children who struggle with this problem.</p>	<p>1. Problem Type:</p> <p>_____</p> <p>Adam had 3 books. He got 6 more books for his birthday. How many books does Adam have now?</p> <p>Adam tenía 3 libros. El recibió 6 más por su cumpleaños. ¿Cuántos libros tiene Adam ahora?</p> <p>B(3, 15)      C(8, 25)    D(7, 49)    E(3, 98)</p>
<p>This is a hard problem for many young children. If the child cannot solve the problem, move on to the next problem</p>	<p>2. Problem Type:</p> <p>_____</p> <p>Josh has 9 balloons and Jill has 4 balloons. How many more balloons does Josh have than Jill?</p> <p>Josh tiene 9 globos y Jill tiene 4 globos. ¿Cuántos globos más tiene Josh que Jill?</p> <p>B(15, 6)    C(43, 25)    D(174, 69)    E(301, 298)</p>

Main Problems	
Directions	Problem and Teacher Notes
<p>If the child can't get started, ask,</p> <p>“Could you show me 12 blocks?”</p> <p><i>Puedes mostrarme 12 cubos?</i></p> <p>If the child can make a set of 12, ask, “If you, me and ___ were going to share these blocks so that everyone got the same amount, how much would each person get?”</p> <p><i>Si tu, _____, y yo queremos compartir los bloques igualmente, ¿cuántos bloques le tocan a cada persona?</i></p>	<p>3. Problem Type:</p> <hr/> <p>There are 12 stickers. 3 children want to share them so they each get the same amount. How many stickers would each child get?</p> <p>Hay 12 calcomanías en un paquete. 3 niñas quieren compartir las calcomanías<sup>2</sup> igualmente. ¿Cuántas calcomanías le tocan a cada niña?</p> <p>B(30, 5)    C(42, 7)    D(63, 3)</p>

<sup>2</sup> If possible, check with a bilingual child on which term they prefer to use when speaking in Spanish: calcomanías, stickers, gominas, or monitas

<b>Main Problems</b>	
<b>Directions</b>	<b>Problem and Teacher Notes</b>
<p>If the child can't get started, ask, "Could you make a set of 9 blocks?"</p> <p><i>Puedes hacer un grupo de 9 cubos?</i></p> <p>If you want to give 3 blocks to each person, how many people could you give blocks to?</p> <p><i>Si quieres darle 3 cubos a una persona, ¿a cuántas personas le puedes dar cubos?</i></p> <p>Encourage the child to model with you if possible.</p>	<p>4. Problem Type: _____</p> <p>Mrs. Brown has 9 cookies. She wants to put 3 cookies on a plate. How many plates would she need for her cookies?</p> <p>La Sra. Brown tiene 9 galletas. Ella quiere servir 3 galletas por plato. ¿Cuántos platos necesita para servir todas las galletas?</p> <p>B(35, 5)    C(63, 9)    D(425, 25)</p>
<p><b>If the child is tired, you can stop the interview here.</b></p> <p>Feel free to pose more than once with different numbers.</p>	<p>5. Problem Type: _____</p> <p>Beth had 10 stickers. She gave 5 stickers to her friend. How many stickers does Beth have now?</p> <p>Beth tenía 10 calcomanías<sup>3</sup>. Ella le dio 5 a su amiga. ¿Cuántas calcomanías tiene Beth ahora?</p> <p>B(14, 6)    C(35, 17)    D(182, 39)    E(201, 4)</p>

<sup>3</sup> If possible, check with a bilingual child on which term they prefer to use when speaking in Spanish: calcomanías, stickers, gomitas, or monitas

<b>Main Problems</b>	
<b>Directions</b>	<b>Problem and Teacher Notes</b>
<p>Feel free to pose more than once with different numbers.</p>	<p>6. Problem Type: _____  Mary has 5 rocks. How many more rocks would she need to find to have 8 rocks?</p> <p>Mary tiene 5 rocas<sup>4</sup>. ¿Cuántas más necesita encontrar si quiere tener 8 rocas?</p> <p>B(8, 13) C(30, 54) D(54, 80) E(193, 200)</p>
	<p>7. Problem Type: _____  _____ Grandma has 4 plates with 3 cookies on every plate. How many cookies does grandma have?</p> <p>Abuelita tiene 4 platos con 3 galletas en cada plato. ¿Cuántas galletas tiene abuelita?</p> <p>B(8, 6) C(4, 12) D(5, 24)</p>

<sup>4</sup> If possible, check with a bilingual child on which term they prefer to use when speaking in Spanish: rocas, piedras o piedritas

**Counting Tasks:** If you were able to assess the child’s understanding of the counting principles during problem solving, you don’t have to assess their understanding of counting with counting tasks.

Task	Number Name Sequence	One-to-one correspondence	Cardinal Principle
<p>A. <b>Counting sequence:</b> “I would like to listen to you count. Please count as high as you can.”</p> <p><i>“En voz alta, por favor cuenta hasta el número más grande que sepas.”</i></p>			
<p>B. <b>Counting a Collection:</b> Provide child with a set. Ask, “can you tell me how many blocks are in this pile?” (try an amount less than 10 and also 31)</p> <p><i>“¿Me puedes decir cuántos cubos hay en el grupo?”</i></p>			

Task	Number Name Sequence	One-to-one correspondence	Cardinal Principle
<p><b>C. Making a Collection:</b> Provide child with a large pile of blocks and ask “Can you make a pile of 8 blocks?”</p> <p><i>¿Puedes hacer un grupo de 8 cubos?</i></p>			
<p><b>D. Supported problem solving.</b> Put 8 blocks in front of the child and ask, “how many blocks did I give you?” or use the collection that the child just made and ask, “If you gave me 2 blocks, how many blocks would you have left?”</p> <p><i>“¿Cuántos cubos te dí?”</i> <i>“¿Si me das 2 cubos, cuántos cubos te quedarían?”</i></p>			



## Tips for Interviewing

### **Remember:**

- The purpose of this interview is for you to learn, not for you to teach the child mathematics.
- Explain to the child that you are learning something new and you might ask a lot of questions so that they can help you understand how children think.
- Take your time. Seldom will you have the luxury of working with just one child!
- If this child were in your classroom, you would have more information about the child and more tools to use to support their learning. You will let some things go today that you won't let go in your classroom.

### **If the child is unsure:**

- Give plenty of wait time
- Make sure the child understands the story. Ask the child to retell the story. Try posing the problem with names and objects the child is familiar with.
- Suggest a tool that will allow the child to direct model by asking, "Would you like to use the blocks?" or "Do you think drawing the pennies would help?"
- Feel free to skip this problem and move on if it seems too hard.

### **If you have trouble figuring out what the child did:**

- If the child didn't say anything or write anything down, ask what numbers they thought of.
- Write down what the child says. Sometimes you will look at your notes later and understand better.
- Ask the child if they can write down what they did to help you understand.
- Elicit the help of your CGI instructor.

### **If the child is incorrect:**

- If the error seems to be a careless error unrelated to understanding you can just move on.
- If the child doesn't seem to understand what they are doing, ask the problem using smaller numbers.
- It's okay to just move on knowing that you've learned that this is a hard problem for this child.



Name /Nombre \_\_\_\_\_

Age/Edad \_\_\_\_\_

A. Alana had 12 jellybeans. She ate 4 jellybeans. How many jellybeans does Alana have now?

Alana tenía 12 dulces. Ella se comió 4. ¿Cuántos dulces tiene Alana ahora?

Name /Nombre \_\_\_\_\_

Age/Edad \_\_\_\_\_

B. Annie has 3 bags of marbles with 4 marbles in each bag. How many marbles does Annie have?

Annie tiene 3 bolsas de canicas con 4 canicas en cada bolsa. ¿Cuántas canicas tiene Annie ahora?

Name /Nombre \_\_\_\_\_

Age/Edad \_\_\_\_\_

C. Carl has 9 stickers. How many more stickers would he need to get to have 14 stickers all together?

Carl tiene 9 calcomanías. ¿Cuántas calcomanías más necesitará para tener 14 en total?

Name /Nombre \_\_\_\_\_ Age/Edad \_\_\_\_\_

1. Adam had \_\_\_ books. He got \_\_\_\_\_ more books for his birthday. How many books does Adam have now?

Adam tenía \_\_\_ libros. El recibió \_\_\_\_\_ más por su cumpleaños.  
¿Cuántos libros tiene Adam ahora?

Name /Nombre \_\_\_\_\_ Age/Edad \_\_\_\_\_

2. Josh has \_\_\_\_ balloons and Jill has \_\_\_\_ balloons. How many more balloons does Josh have than Jill?

Josh tiene \_\_\_\_ globos y Jill tiene \_\_\_\_ globos. ¿Cuántos globos más tiene Josh que Jill?

Name /Nombre \_\_\_\_\_

Age/Edad \_\_\_\_\_

3. There are \_\_\_ stickers. \_\_\_\_ children want to share them so they each get the same amount with no stickers left. How many stickers should each child get?

Hay \_\_\_ calcomanías en un paquete. \_\_\_\_ niñas quieren compartir las calcomanías<sup>5</sup> igualmente. ¿Cuántas calcomanías le tocan a cada niña?



Name /Nombre \_\_\_\_\_

Age/Edad \_\_\_\_\_

4. Mrs. Brown has \_\_\_\_\_ cookies. She wants to put \_\_\_\_\_ cookies on a plate. How many plates would she need for her cookies?

La Sra. Brown tiene \_\_\_\_\_ galletas. Ella quiere servir \_\_\_\_\_ galletas por plato. ¿Cuántos platos necesita para servir todas las galletas?

Name /Nombre \_\_\_\_\_

Age/Edad \_\_\_\_\_

5. Beth had \_\_\_\_\_ stickers. She gave \_\_\_\_\_ stickers to her friend. How many stickers does Beth have now?

Beth tenía \_\_\_\_\_ calcomanías. Ella le dio \_\_\_\_\_ a su amiga. ¿Cuántas calcomanías tiene Beth ahora?

Name /Nombre \_\_\_\_\_

Age/Edad \_\_\_\_\_

6. Mary has \_\_\_ rocks. How many more rocks would she need to find to have \_\_\_ rocks?

Mary tiene \_\_\_ rocas. ¿Cuántas más necesita encontrar si quiere tener \_\_\_ rocas?

Name /Nombre \_\_\_\_\_ Age/Edad \_\_\_\_\_

7. Grandma has \_\_\_ plates with \_\_\_ cookies on every plate. How many cookies does grandma have?

Abuelita tiene \_\_\_ platos con \_\_\_ galletas en cada plato. ¿Cuántas galletas tiene abuelita?