

Formative Assessment2 – Student

Student Name _____

Concept 3: More/Less Trains

CC Standard: KCC6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

Materials: Connecting cube trains of the following lengths and colors: 7 brown, 8 blue, 11 yellow, and 9 green;




One combination train YYYrrrYYYr;

Two groups of 9 and 12 counters (not connected).

Goal: The student will use one train to figure out another, and compare trains and/or piles to find out how many more or less one quantity is than the other.

Procedure: Follow the prompts below.

ASSESSMENT RESULTS					
<i>Directions: Record results by writing the date in the appropriate column. The column depends on how many cubes the student was given for the assessment.</i>					
Using One Train to Determine Another	If More		If Less		
	7 & 8	8 & 11	11 & 9		
I Uses train in figuring it out					
N Counts all					
How Many More	Lined Up		Not Lined Up		
	7 & 8	8 & 11	Comb. Train 6 & 4	Piles 9 & 12	Piles 6 & 9
I Knows without figuring out					
W Figures out					
N Unable to answer correctly					
How Many Less	Lined Up				
	11 & 9				

Prompts		Record student responses:	
(Show a train of 7 brown cubes.) 		1. <u>ASK</u> : "How many cubes are in this brown train?"	
Show 7 brown and 8 blue trains (side by side) 		2. <u>ASK</u> : "Now that you know how many are in the brown train, can you tell me how many you think are in the blue train?"	
3. <u>ASK</u> : "Which train has more?.....How many more?" (If student is unable to answer, ask..."How many extras?")	Record student responses:	I Counts on or adds on N Counts all I Knows without figuring it out W Has to think about it or figure it out N Says the number in the longer train N- Unable to answer	
Show only 8 blue and 11 yellow trains (side by side) 		4. <u>ASK</u> : "Now that you know how many are in the blue train, can you tell me how many you think are in the yellow train?"	
5. <u>ASK</u> : "Which train has more?.....How many more?" (If student is unable to answer, ask..."How many extras?")	Record student responses:	I Counts on or adds on N Counts all I Knows without figuring it out W Figures it out N Says the number in the longer train N- Unable to answer	

Show only 11 yellow and 9 green trains (side by side)

6. **ASK:** “How many do you think are in the green train?”

7. **ASK:** “Which train has less?.....How many less?”

(If student is unable to answer, ask...“What would we have to do to make the yellow train the same as the green train?”)

Record student responses:

I Counts on or adds on
N Counts all

I Tells how many less without figuring it out
W Figures out how many less
N Says the number in the shorter train
N- Unable to answer

Going On

(If the child is able to tell how many more or less, ask the following questions.)

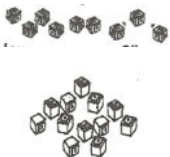
(Show combination train **YYYrrrYYYr**.)



8. **ASK:** “How many yellow?” “How many red?” “Are there more yellow or red?” “How many more?”

(If student is unable to answer, ask...“How many extras?”)

(Show a **pile** of 9 blue cubes, i.e. not attached, and a pile of 12 yellow cubes. Have the student count out each pile.)



9. **ASK:** “Which pile has more?” “How many more?”

(If student is unable to answer, ask...“How many extras?” “How did you find out?”)

Record student responses:

I Knows without figuring it out
W Figures it out
N Says the number in larger group
N- Unable to answer

I Knows without figuring out
W Figures out how many more
N Tells the number in the group that has more
N- Unable to answer

Going Back

(If the child is unable to figure out the difference between piles of 9 and 12, change the pile of 12 to 6 and have the child compare 6 and 9.)

Record student responses:

I Knows without figuring out
W Figures out how many more
N Tells the number in the group that has more
N- Unable to answer

Indicators**Prompts 2, 4, 6**

I Counts on or adds on	<i>Student is able to tell the number in the second train without counting all the cubes.</i>
N Counts all	<i>Student does not readily see that he/she can use one train to help them figure out the other, so they count all the cubes in each.</i>

Prompts 3, 5

I Knows without figuring it out	<i>Student knows the relationship between the two quantities without having to figure it out.</i>
W Has to think about it or figure it out	<i>Student does not automatically know, but takes time to think about the answer.</i>
N Says the number in the longer train	<i>Student may interpret the question, "How many in the train with more?"</i>
N- Unable to answer	<i>Student does not respond or doesn't know.</i>

Prompts 7

I Tells how many less without figuring it out	<i>Student knows the relationship between the two quantities without having to figure it out.</i>
W Figures out how many less	<i>Student does not automatically know, but takes time to think about the answer.</i>
N Says the number in the shorter train	<i>Student may interpret the question, "How many in the train with less?"</i>
N- Unable to answer	<i>Student does not respond or doesn't know.</i>

Prompt 8

I Knows without figuring it out	<i>Student knows the relationship between the two quantities without having to figure it out.</i>
W Figures it out	<i>Student does not automatically know, but takes time to think about the answer.</i>
N Says the number in larger group	-
N- Unable to answer	<i>Student does not respond or doesn't know.</i>

Prompt 9

I Knows without figuring out	<i>Student knows the relationship between the two quantities without having to figure it out.</i>
W Figures out how many more	<i>Student does not automatically know, but takes time to think about the answer.</i>
N Tells the number in the group that has more	-
N- Unable to answer	<i>Student does not respond or doesn't know.</i>