

# 43. Two Ways to Look at a Quantity: What Does 16 Look Like?

- MODEL MULTIPLE REPRESENTATIONS OF A NUMBER
- REINFORCE THE LINEAR REPRESENTATION AND THE BASE TEN REPRESENTATION OF A NUMBER

#### TEACHER NEEDS:

25 blocks  
small holders  
2-place mat  
digit flip cards

#### STUDENT NEEDS:

40 blocks  
8 small holders  
2-3 copies of the worksheet  
(filled in by teacher in advance)  
digit flip cards

30 minutes


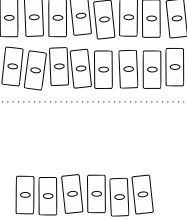
#### HELPFUL HINTS:

The quantity to be pictured on each worksheet can be filled in before copying the worksheets or it can be filled in individually according to student's needs.


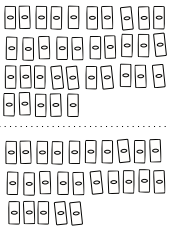
#### GROUP ACTIVITY:

1. Put a copy of a 2-place mat on the overhead or in a place where all the students can see.
2. Place 16 single blocks next to the mat.
3. Ask a volunteer to put them on the mat. (All the blocks go in the ones place on the mat.)
4. Give one digit flip card to a second volunteer and ask him or her to use it to name the quantity.
5. Ask a student to explain why this is a problem. (You cannot represent the number 16 with a single digit.)
6. Ask for suggestions. (Use a second digit flip card)
7. When a second digit flip card is added, many students will want to put both digits under the ones place. Discuss why this is incorrect. (Each digit represents a place value, or a different size block, and there can only be one digit in a place.)
8. Ask for another suggestion, coming to the conclusion that if the blocks were packed as much as possible, you could make a block-of-10 and move it to the tens space on the mat.
9. Then the digits can be properly placed to name the number of each size block. (1 ten and 6 ones)
10. Draw both representations of the number on the worksheet for all to see.
11. Repeat these steps using the number 25. (25 ones, 1 ten and 15 ones, 2 tens and 5 ones)



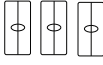

Draw the blocks to show the number 16 2 different ways.

TENS	ONES
	




Draw the blocks to show the number 35 2 different ways.

TENS	ONES
	





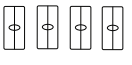

Draw the blocks to show the number 35 2 different ways.

TENS	ONES
	
	




Draw the blocks to show the number 46 2 different ways.

TENS	ONES
	
	

Draw the blocks to show the number 46 3 different ways.

TENS	ONES
	
	
	

Draw the blocks to show the number 63 2 different ways.

TENS	ONES
	
	

INDEPENDENT WORK:

- Students complete at least one example for the worksheet with two representations and one for the worksheet with three representations.

Assessment:

DOES THE STUDENT:

- count out the correct blocks to represent a number
- draw more than one representation of a that number

Differentiation:





REINFORCEMENT:

- Use the same number (increasing in difficulty) for the whole group and work through each step together.

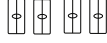

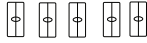

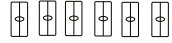

EXTENSION:

- Draw as many representations of the number 63 as you can. (You will need more than one copy of the 3-representation worksheet.)

Draw the blocks to show the number 63 2 different ways.

TENS	ONES
	
	

Draw the blocks to show the number 63 3 different ways.

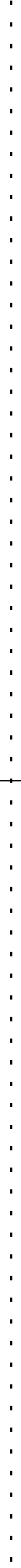
TENS	ONES
	
	
	

Name: \_\_\_\_\_

Draw the blocks to show the number 16 2 different ways.

TENS

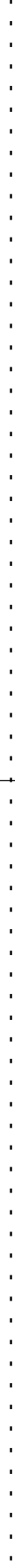
ONES



Draw the blocks to show the number 35 2 different ways. Name: \_\_\_\_\_

TENS

ONES

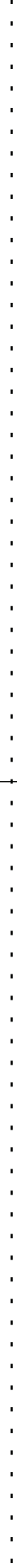


Name: \_\_\_\_\_

Draw the blocks to show the number \_\_\_\_\_ 2 different ways.

TENS

ONES



Draw the blocks to show the number 46 3 different ways. Name: \_\_\_\_\_

TENS

ONES

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Draw the blocks to show the number \_\_\_\_\_ 3 different ways. Name: \_\_\_\_\_

TENS

ONES

.....

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