

## BUILDING NUMBERS TO 50

### Performance Standard 6A.A

Represent numbers using cubes and drawings accordingly:

- *Mathematical knowledge:* apply mathematical concepts to count cubes and replace 10 ones with a 10 rod, make a drawing of the blocks that matches the number recorded.
- *Strategic knowledge:* systematically represent the relationship of 10 cubes and a 10 rod, know when to trade for a 10 rod consistently, count the new number correctly.
- *Explanation:* explain completely what was done and why it was done.

### Procedures

1. *In order to demonstrate knowledge and use of numbers and their many representations in a broad range of theoretical and practical setting (6A)*, students should experience sufficient learning opportunities to develop the following:
  - Develop initial understanding of place value and the base-ten number system using manipulatives.
  - Connect number words and numerals to the quantities they represent.
2. Have students review and discuss the task to be completed and how the rubric will be used to evaluate it.
3. Have students pair up to play. Each pair should have a number cube marked 5 – 10, place-value blocks, and the recording sheet.
4. Have the first person roll the number cube, take that many blocks, draw what he/she has in the left-hand column of the recording sheet, and record the number in the right-hand column. The other person does the same. Play continues until one person reaches or goes over 50.
5. Evaluate each student's performance using the rubric as follows and use the guide on the rubric to determine each student's performance level:
  - *Mathematical knowledge:* check if the drawing matches the number recorded. Students who are exceeding or meeting will be able to distinguish the rods and the cubes in their drawings. Students who are approaching may only draw 1's to represent the number, and
  - *Strategic knowledge:* observe the trading strategy. Does the student know when to trade for a 10-rod consistently? A student who exceeds or meets the standard will count the new number correctly (e.g. 10, 20, 30, 31, 32, 33, 34). A student who is starting to meet or not yet meeting the standard will revert to counting all by 1's.
  - *Explanation:* a student used correct vocabulary to describe what was done and completely explains why it was done.

### Examples of Student Work follow

### Time Requirements

- 20 - 25 minutes

### Resources

- 5 – 10 number cube
- Place-value blocks
- Copy of "Building Numbers to 50" recording sheet
- Mathematics Rubric

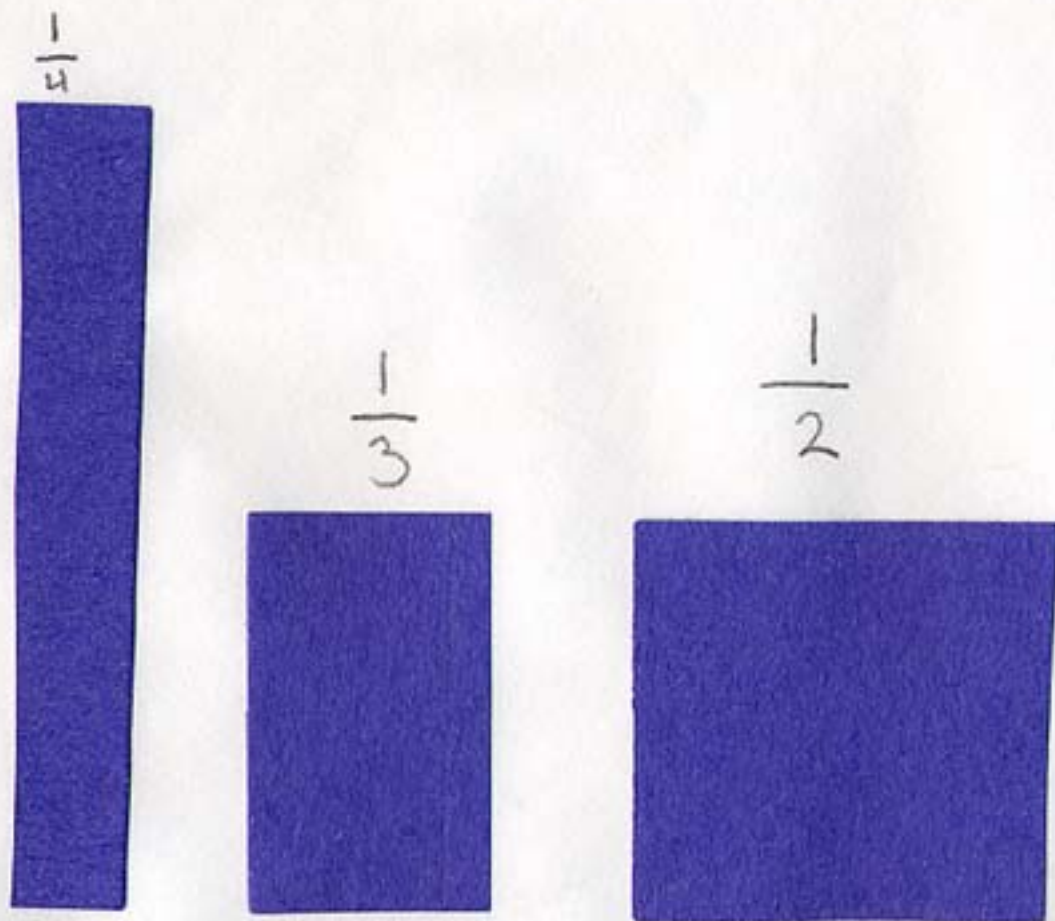
### ASSESSMENT 6A.A

NAME \_\_\_\_\_ DATE \_\_\_\_\_

**BUILDING NUMBERS TO 50**

Student Recording Sheet

MY BLOCKS LOOK LIKE THIS	MY NUMBER LOOKS LIKE THIS



$\frac{1}{3}$



$\frac{1}{2}$

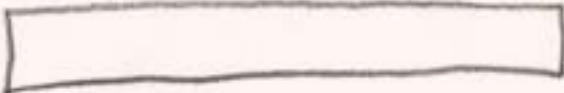

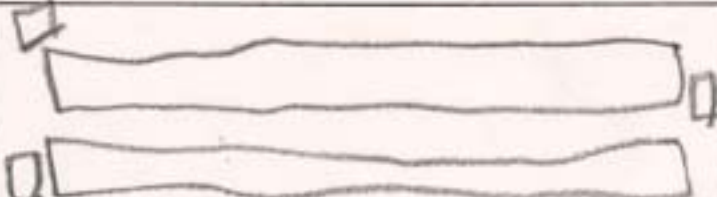






$\frac{1}{4}$



**BUILDING NUMBERS TO 50**

Student Recording Sheet

MY BLOCKS LOOK LIKE THIS	MY NUMBER LOOKS LIKE THIS
	<p>10</p>
	<p>17</p>
	<p>23</p>
	<p>33</p>
	<p>42</p>
	<p>49</p>
	<p>54</p>

"We rolled the dice. Then you grabbed as many cubes as it said or longs. Then you drew the picture and wrote down the number. When you got to 50 or all the boxes were filled you stopped."



One  
fourth

$$\frac{1}{4}$$

one  
Third

$$\frac{1}{3}$$

one  
half

$$\frac{1}{2}$$