

# Mathematics: By Entry to Kindergarten

## COUNTING AND CARDINALITY

### 1 Child knows number names and the count sequence. 1

- a Counts verbally or signs to at least 20 by ones. 1.A
- 

### 2 Child recognizes the number of objects in a small set. 2

- a Instantly recognizes, without counting, small quantities of up to five objects and says or signs the number. 2.A
- 

### 3 Child understands the relationship between numbers and quantities. 3

- a When counting objects, says or signs the number names in order, pairing one number word that corresponds with one object, up to at least 10. 3.A
  - b Counts and answers “How many?” questions for approximately 10 objects. 3.B
  - c Accurately counts as many as five objects in a scattered configuration. 3.C
  - d Understands that each successive number name refers to a quantity that is one larger. For example, knows that six is larger than five. 3.D
  - e Understands that the last number said represents the number of objects in a set. 3.E
- 

### 4 Child compares numbers. 4

- a Identifies whether the number of objects in one group is more than, less than, or the same as objects in another group for up to at least five objects. 4.A
  - b Identifies and uses numbers related to order or position from 1–10. 4.B
- 

### 5 Child associates a quantity with written numerals and begins to write numbers. 5

- a Associates a number of objects with a written numeral 0–5. 5.A
  - b Recognizes and, with support, writes some numerals up to 10. 5.B
-

## OPERATIONS AND ALGEBRAIC THINKING

### 6 Child understands addition as adding to and understands subtraction as taking away from. 6

- a Represents addition and subtraction in different ways, such as with fingers, objects, and drawings. 6.A
  - b Solves addition and subtraction word problems. For example, when told “You have two carrots and your friend gives you two more. How many do you have now?” Adds and subtracts up to five to or from a given number. 6.B
  - c With adult assistance, begins to use counting on from the larger number for addition. For example, when adding a group of three and a group of two, counts “One, two, three ...” and then counts on “four, five!” (keeping track with fingers). When counting back for subtraction such as taking away three from five, counts, “Five, four, three ... two!” (keeping track with fingers). 6.C
- 

### 7 Child understands simple patterns. 7

- a Fills in missing elements of simple patterns. Duplicates simple patterns in a different location than demonstrated, such as making the same alternating color pattern with blocks at a table that was demonstrated on the rug. Extends patterns, such as making an eight block tower of the same pattern that was demonstrated with four blocks. 7.A
  - b Identifies the core unit of sequentially repeating patterns, such as color in a sequence of alternating red and blue blocks. 7.B
- 

## NUMBERS AND OPERATIONS IN BASE TEN

### 8 Child works with numbers 11 to 19 to gain foundations for place value. 8

- a Not addressed in Head Start Early Learning Outcomes Framework. 8.A
- 

## MEASUREMENT AND DATA

### 9 Child measures objects by their various attributes using standard and non-standard measurement and uses differences in attributes to make comparisons. 9

- a Measures using the same unit, such as putting together snap cubes to see how tall a book is. 9.A
  - b Compares or orders up to five objects based on their measurable attributes, such as height or weight. 9.B
  - c Uses comparative language, such as shortest, heavier, or biggest. 9.C
- 

### 10 Child classifies objects into given categories; counts the numbers of objects in each category and sorts the categories by count. (Limit category counts to be less than or equal to 10). 10

- a Not addressed in HEAD START EARLY LEARNING OUTCOMES FRAMEWORK. 10.A
-

## GEOMETRY AND SPATIAL SENSE

### 11 Child identifies, describes, compares, and composes shapes. 11

- a Names and describes shapes in terms of length of sides, number of sides, and number of angles. 11.A
  - b Correctly names basic shapes regardless of size and orientation. 11.B
  - c Analyzes, compares, and sorts two- and three-dimensional shapes and objects in different sizes. Describes their similarities, differences, and other attributes, such as size and shape. 11.C
  - d Creates and builds shapes from components. 11.D
- 

### 12 Child explores the positions of objects in space. 12

- a Understands and uses language related to directionality, order, and the position of objects, including up/down, and front/behind. 12.A
- b Correctly follows directions involving their own position in space, such as “Stand up” and “Move forward.” 12.B