KINDERGARTEN MATHEMATICS GRADING BENCHMARK (11.29.2016)

## Any items left blank for a given term means the skill is not being assessed at this time.

## Counting and Cardinality

## ENDURING UNDERSTANDING

Students understand and explain what numbers mean, how they may be represented, and what relationships exist among them to accurately and efficiently perform computations

## 1. Counts to 100 by ones and tens

K.CC.1: Counts to 100 by ones or tens.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to count up to 100 by ones and tens | With support counts up to 100 by ones and tens. | Consistently and independently counts to 100 by ones and tens. | Consistently and independently counts and writes to 120 by ones and tens. |

## 2. Counts forward beginning from a given number

## K.CC.2: Count forward beginning from a given number within the known sequence

## (instead of having to begin at 1)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to count forward from any given number | With support counts forward beginning at a given number  | Consistently and independently counts forward beginning at a given number | Consistently and independently counts and writes to 120 beginning at a number less than 120. |

## 3. Writes the numbers from 0-20 with correct number formation

## KCC3: Writes the numbers from 0-20.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** | Unable to write the numbers from 0-10 | With support can write numbers from 0-10 | Consistently and independently can write the numbers 0-10 with correct number formation | Consistently and independently can write the numbers to 120 with correct number formation |
| **2nd** | Unable to write the numbers from 0-20 | With support can write numbers from 0-20 | Consistently and independently can write the numbers 0-20 with correct number formation | Consistently and independently can write the numbers to 120 with correct number formation |
| **3rd** | Unable to write the numbers from 0-20 | With support can write numbers from 0-20 | Consistently and independently can write the numbers 0-20 with correct number formation | Consistently and independently can write the numbers to 120 with correct number formation |

**4. Understands the relationship between numbers and quantities**

KCC4: Understands the relationship between numbers and quantities; connect counting to cardinality.

1. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
2. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** | Unable to understand the relationship between numbers and quantities | With support is able to understand the relationship between numbers and quantities up to 10 in various arrangement | Consistently and independently understands the relationship between numbers and quantities up to 10 in various arrangements | Consistently and independently understands the relationship between numbers and quantities up to 120 in various arrangements |
| **2nd** | Unable to understand the relationship between numbers and quantities | With support is able to understand the relationship between numbers and quantities up to 20 in various arrangement | Consistently and independently understands the relationship between numbers and quantities up to 20 in various arrangements  | Consistently and independently understands the relationship between numbers and quantities up to 120 in various arrangements |
| **3rd** | Unable to understand the relationship between numbers and quantities | With support is able to understand the relationship between numbers and quantities up to 100 in various arrangement | Consistently and independently understands the relationship between numbers and quantities up to 100 in various arrangements | Consistently and independently understands the relationship between numbers and quantities up to 120 in various arrangements |

**5. Counts to answer “how many?”**

KCC5: Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** | Unable to count objects in a group and answer “how many?” up to 10 | With support can count objects in a group and answer “how many?” up to 10 | Consistently and independently can count objects in a group and answer “how many?” up to 10  | Consistently and independently can count objects in a group and answer “how many?” up to 120 |
| **2nd** | Unable to count objects in a group and answer “how many?” up to 20 | With support can count objects in a group and answer “how many?” up to 20 | Consistently and independently can count objects in a group and answer “how many?” up to 20  | Consistently and independently can count objects in a group and answer “how many?” up to 120 |
| **3rd** | Unable to count objects in a group and answer “how many?” up to 20 | With support can count objects in a group and answer “how many?” up to 20 | Consistently and independently can count objects in a group and answer “how many?” up to 20  | Consistently and independently can count objects in a group and answer “how many?” up to 120 |

**6. Identifies groups of objects using the term greater than, less than, or equal to**

## 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.

##

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** | Unable to identify groups of objects as greater than, less than, or equal to the number of objects in another group | With support can identify groups of objects as greater than, less than, or equal to the number of objects in another group | Consistently and independently can identify groups of objects as greater than, less than, or equal to the number of objects in another group | Consistently and independently compares two- digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >,=, and < |
| **3rd** | Unable to identify groups of objects as greater than, less than, or equal to the number of objects in another group | With support can identify groups of objects as greater than, less than, or equal to the number of objects in another group | Consistently and independently can identify groups of objects as greater than, less than, or equal to the number of objects in another group | Consistently and independently compares two- digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >,=, and < |

##

**7. Compares numbers**

K.CC.7: Compare two numbers between 1 and 10 presented as written numerals.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** | Unable to compare two numbers between 1 and 10, as written numerals | With support can compare two numbers between 1 and 10, as written numerals | Consistently and independently can compare two numbers between 1 and 10, as written numerals | Consistently and independently compares two- digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >,=, and <, using written numerals |
| **3rd** | Unable to compare two numbers between 1 and 10, as written numerals | With support can compare two numbers between 1 and 10, as written numerals | Consistently and independently can compare two numbers between 1 and 10, as written numerals | Consistently and independently compares two- digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >,=, and <, using written numerals |

## Operations and Algebraic Thinking

## ENDURING UNDERSTANDING: Students possess an understanding of addition and subtraction through modeling and manipulation of objective and apply these skills to solve problems.

K.OA.1:Represents addition and subtraction with objects, fingers, mental images, and drawings.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to represent addition and subtractions with objects, fingers, mental images, and drawings. | With support is able to represent addition and subtractions with objects, fingers, mental images, and drawings. | Consistently and independently able to represent addition and subtractions with objects, fingers, mental images, and drawings. | Consistently and independently solves word problems within 20 involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions |

## Solves addition facts and word problems up to 10

K.OA.2: Solve addition facts and word problems up to 10, e.g., by using objects or drawings to represent the problem.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to solve addition facts and word problems up to 10. | With support is able to solve addition facts and word problems up to 10. | Consistently and independently able to solve addition facts and word problems up to 10. | Consistently and independently solves word problems within 20 involving situations of adding to, putting together, and comparing, with unknowns in all positions. |

## Solves subtraction facts and word problems up to 10

K.OA.2: Solve subtraction facts and word problems up to 10, e.g., by using objects or drawings to represent the problem.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to solve subtraction facts and word problems up to 10. | With support is able to solve subtraction facts and word problems up to 10. | Consistently and independently able to solve subtraction facts and word problems up to 10. | Consistently and independently solves word problems within 20 involving situations of taking from, taking apart, and comparing, with unknowns in all positions. |

## Decomposes number to 10

K.OA.3: Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation

(e.g., 5 = 2 + 3 and 5 = 4 + 1).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to decompose numbers less than or equal to 10 into pairs in more than one way (e.g. 5=2+3 and 5= 4+1)  | With support is able to decompose numbers less than or equal to 10 into pairs in more than one way (e.g. 5=2+3 and 5= 4+1) | Consistently and independently decomposes numbers less than or equal to 10 into pairs in more than one way (e.g. 5=2+3 and 5= 4+1) | Consistently and independently decomposes numbers less than or equal to 20 multiple ways (e.g. 5= 1+1+1+2) |

## Find the missing addend to make 10

## K.OA.4: For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to find the missing addends addends to 10. | With prompting and support find the number that makes 10 when added to any given number from 1 to 9. | Consistently and independently can find the number that makes 10 when added to any given number from 1 to 9. | Consistently and independently can “make a ten”. (e.g. 8+5=8+2+3=10+3=13) |

## Fluently adds to a sum of 5

K.OA.5: Fluently adds numbers within 5.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to fluently add numbers facts to 5 | With support is able to fluently add to 5. | Consistently and independently is able to fluently add to 5. | Consistently and independently is able to fluently add within 10. |

##

##

## Fluently subtracts to a sum of 5

K.OA.5: Fluently subtracts numbers within 5.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to fluently subtract number facts to 5. | With support is able to fluently subtract to 5. | Consistently and independently is able to fluently subtract to 5. | Consistently and independently is able to subtract within 10. |

##

## Numbers and Operations in Base Ten

**ENDURING UNDERSTANDING:** Students understand how to collect, represent analyze and interpret data gathered using a variety of tools and techniques.

## Works with numbers 11-19 to develop an understanding of place value

K.NBT.1: Work with numbers 11-19 to gain foundations for place value. Compose and decompose numbers from 11 to 19 into ten and ones and some further ones, e.g., using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18=10+8); understand that these numbers are composed 10 ones and one, two, three, four, five, six, seven, eight, or nine ones.

## Note: A set of ten should not be referred to as a “ten” in kindergarten.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | unable to understanding of place value does not composes and decomposes numbers from 11 to 19 into ten ones and more ones, using objects or drawings, and records results by a drawing or equation (e.g., 18=10+8); | With support, composes and decomposes numbers from 11 to 19 into ten ones and more ones, using objects or drawings, and records results by a drawing or equation (e.g., 18=10+8); | Consistently independently composes and decomposes numbers from 11 to 19, using objects or drawings, and records results by a drawing or equation (e.g., 18=10+8) | Consistently independently composes and decomposes two-digit numbers that are represented as tens and ones. |

## Measurement and Data

**ENDURING UNDERSTANDING:** Students understand how to collect, represent analyze and interpret data gathered using a variety of tools and techniques.

## Describes measurable attributes (e.g., describe one child as taller/shorter)

## K.MD. 1: Describes measurable attributes of objects, such as length or weight.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** | Unable to describe measureable attributes of objects such as length and weight | With support, describes measurable attributes of objects such as length and weight | Consistently and independently describes measurable attributes of objects such as length and weight | Consistently and independently describes three measurable attributes of objects such as length and weight and uses numbers to show the difference |
| **3rd** | Unable to describe measureable attributes of objects such as length and weight | With support, describes measurable attributes of objects such as length and weight | Consistently and independently describes measurable attributes of objects such as length and weight | Consistently and independently describes three measurable attributes of objects such as length and weight and uses numbers to show the difference |

## Compares measureable attributes (e.g., describe one child as taller/shorter)

## K.MD.2: Directly compare two objects with a measurable attribute in common.

##

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** | Unable to compare measureable attributes of objects using “more of” or “less of” (e.g., taller, shorter) | With support, describes measurable attributes of objects using “more of” or “less of” (e.g., taller, shorter) | Consistently and independently describes measurable attributes of objects using “more of” or “less of” (e.g., taller, shorter) | Consistently and independently compares three measurable attributes of objects such as length and weight and uses numbers to show the difference |
| **3rd** | Unable to describe measureable attributes of objects using “more of” or “less of” (e.g., taller, shorter) | With support, describes measurable attributes of objects using “more of” or “less of” (e.g., taller, shorter) | Consistently and independently describes measurable attributes of objects using “more of” or “less of” (e.g., taller, shorter) | Consistently and independently compares three measurable attributes of objects such as length and weight and uses numbers to show the difference |

## Classifies objects and counts the number of objects in each category

K.MD 3: Classify objects and count the number of objects in each category.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** | Unable to classify objects into given categories; count the number of objects and sort by the count | With support, classifies objects into given categories; count the number of objects and sort by the count (up to 10 objects in each category) | Consistently and independently classifies objects into given categories; count the numbers of objects and sort by the count (up to 10 objects in each category) | Consistently and independently creates categories and classifies a given collection of objects during work times as well as other curricular/play activities |
| **2nd** |  |  |  |  |
| **3rd** |  |  |  |  |

## Geometry

**ENDURING UNDERSTANDING:** Students understand, explain, and apply the properties and relationships among and between geometric figures to appreciate the importance of geometry in our world.

**Identifies position of an object in space (above, below, next to, behind, etc.)**

K.G.1: Describe objects in the environment using names of shapes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** | Unable to describe objects in the environment using names of shapes. | With support is able to describe objects in the environment using names of shapes. | Consistently and independently identifies and describes objects and uses positional words appropriately. | N/A |
| **2nd** | Unable to describe objects in the environment using names of shapes. | With support is able to describe objects in the environment using names of shapes. | Consistently and independently identifies and describes objects and uses positional words appropriately. | N/A |
| **3rd** |  |  |  |  |

**Names, identifies and describes shapes**

K.G2: Correctly name shapes regardless of their orientations or overall size.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** | Unable to name shapes regardless of their orientation or overall size. | With support is able to name shapes (circle, square, triangle, rectangle, hexagon)regardless of their orientation or overall size. | Consistently and independently is able to name shapes (circle, square, triangle, rectangle, hexagon) regardless of their orientation or overall size. | Able to consistently build and draw shapes that possess defining attributes (color, size, orientation, etc.). |
| **2nd** | Unable to name shapes regardless of their orientation or overall size. | With support is able to name shapes (circle, square, triangle, rectangle, hexagon) regardless of their orientation or overall size. | Consistently and independently s able to name shapes (circle, square, triangle, rectangle, hexagon) regardless of their orientation or overall size. | Able to consistently build and draw shapes that possess defining attributes (color, size, orientation, etc.). |
| **3rd** |  |  |  |  |

**Identifies shapes as two-dimensional and three-dimensional shapes**

K.G3: Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** | Unable to identifying and naming shapes regardless of their orientation or overall size. | With support is able to name shapes (circle, square, triangle, rectangle, hexagon) and names three- dimensional solid shapes (cubes, cones, cylinders, and spheres.) Can differentiate between 3 dimensional (solid) and 2 dimensional (flat) shapes. | Consistently and independently identifies and names 2 dimensional shapes (circle, square, triangle, rectangle, hexagon) three-dimensional shapes (cubes, cones, cylinders, and spheres.) Can differentiate between 3 dimensional (solid) and 2 dimensional (flat) shapes. | Able to consistently build and draw shapes that possess defining attributes of flat and solid shapes (color, size, orientation, etc.). |
| **3rd** |  |  |  |  |

**Analyzes and compares shapes two and three-dimensional shapes**

K.G4: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** | Unable to analyze and compare two and three-dimensional shapes using informal language to describe attributes. | With support is able to analyze and compare two and three-dimensional shapes using informal language to describe attributes. | Consistently and independently compares two and three-dimensional shapes using informal language to describe attributes | Able to consistently compose 2- and 3- dimensional shapes to create a composite shape and compose new shapes from the composite shape. |
| **3rd** | Unable to analyze and compare two and three-dimensional shapes using informal language to describe attributes. | With support is able to analyze and compares two and three-dimensional shapes using informal language to describe attributes. | Consistently and independently compares two and three-dimensional shapes using informal language to describe attributes. | Able to consistently compose 2- and 3- dimensional shapes to create a composite shape and compose new shapes from the composite shape. |

**Models shapes in the world by building shapes from components (e.g., sticks and clay balls)**

K.G.5: Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to build simple shapes to form larger shapes. | With support is able to build simple shapes to form larger shapes.  | Consistently and independently build simple shapes to form larger shapes. | Able to consistently build 2- and 3- dimensional shapes to create a composite shape and compose new shapes from the composite shape. |

K.G.6: Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| **1st** |  |  |  |  |
| **2nd** |  |  |  |  |
| **3rd** | Unable to compose simple shapes to form larger shapes. | With support is able to compose simple shapes to form larger shapes. | Consistently and independently composes simple shapes to form larger shapes.  | Able to consistently compose 2- and 3- dimensional shapes to create a composite shape and compose new shapes from the composite shape. |