New York Mathematics - Next Generation

Grade K

Adopted 2017

Standards for Mathematical Practice

1. **Make sense of problems and persevere in solving them.** MP.1
2. **Reason abstractly and quantitatively.** MP.2
3. **Construct viable arguments and critique the reasoning of others.** MP.3
4. **Model with mathematics.** MP.4
5. **Use appropriate tools strategically.** MP.5
6. **Attend to precision.** MP.6
7. **Look for and make use of structure.** MP.7
8. **Look for and express regularity in repeated reasoning.** MP.8

Counting and Cardinality

A. Know number names and the count sequence. NY-PK-K.CC.A

1. Count to 100 by ones and by tens. NY-K.CC.1
2. Count to 100 by ones beginning from any given number (instead of beginning at 1). NY-K.CC.2
3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). NY-K.CC.3

B. Count to tell the number of objects. NY-PK-K.CC.B

4. Understand the relationship between numbers and quantities up to 20; connect counting to cardinality. NY-K.CC.4
   a. 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. (1:1 correspondence) NY-K.CC.4.A
   b. Understand that the last number name said tells the number of objects counted, (cardinality). The number of objects is the same regardless of their arrangement or the order in which they were counted. NY-K.CC.4.B
   c. Understand the concept that each successive number name refers to a quantity that is one larger. NY-K.CC.4.C
   d. Understand the concept of ordinal numbers (first through tenth) to describe the relative position and magnitude of whole numbers. NY-K.CC.4.D

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a. Answer counting questions using as many as 20 objects arranged in a line, a rectangular array, and a circle. Answer counting questions using as many as 10 objects in a scattered configuration. NY-K.CC.5.A

b. Given a number from 1–20, count out that many objects. NY-K.CC.5.B

C. Compare numbers. NY-PK-K.CC.C

6. Identify whether the number of objects in one group is greater than (more than), less than (fewer than), or equal to (the same as) the number of objects in another group. NY-K.CC.6

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

Operations and Algebraic Thinking

A. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. NY-K.OA.A

1. Represent addition and subtraction using objects, fingers, pennies, drawings, sounds, acting out situations, verbal explanations, expressions, equations, or other strategies. NY-K.OA.1

a. Add and subtract within 10. NY-K.OA.2.A

b. Solve addition and subtraction word problems within 10. NY-K.OA.2.B

3. Decompose numbers less than or equal to 10 into pairs in more than one way. NY-K.OA.3

4. Find the number that makes 10 when given a number from 1 to 9. NY-K.OA.4

5. Fluently add and subtract within 5. NY-K.OA.5

A. Understand simple patterns. NY-PK-K.OA.A

6. Duplicate, extend, and create simple patterns using concrete objects. NY-K.OA.6

Measurement and Data

A. Describe and compare measurable attributes. NY-PK-K.MD.A

1. Describe measurable attributes of an object(s), such as length or weight, using appropriate vocabulary. NY-K.MD.1

2. Directly compare two objects with a common measurable attribute and describe the difference. NY-K.MD.2

A. Classify objects and count the number of objects in each category. NY-K.MD.A

3. Classify objects into given categories; count the objects in each category and sort the categories by count. NY-K.MD.3

4. Explore coins (pennies, nickels, dimes, and quarters) and begin identifying pennies and dimes. NY-K.MD.4

Geometry

A. Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). NY-K.G.A

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1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. NY-K.G.1
2. Name shapes regardless of their orientation or overall size. NY-K.G.2
3. Understand the difference between two-dimensional (lying in a plane, "flat") and three-dimensional ("solid") shapes. NY-K.G.3

B. Analyze, compare, sort, and compose shapes. NY-K.G.B

4. Analyze, compare, and sort two-and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts, and other attributes. NY-K.G.4
5. Model objects in their environment by building and/or drawing shapes. NY-K.G.5
6. Compose larger shapes from simple shapes. NY-K.G.6

Number and Operations in Base Ten

A. Work with numbers 11–19 to gain foundations for place value. NY-K.NBT.A

1. Compose and decompose the numbers from 11 to 19 into ten ones and one, two, three, four, five, six, seven, eight, or nine ones. NY-K.NBT.1