New York State Next Generation Mathematics Learning Standards

This document is intended to help educators identify the key changes that have occurred to the content standards for this grade level/course and to assist with designing curriculum and lessons aligned to the NYS Next Generation Mathematics Learning Standards. This document does not contain the comprehensive list of learning standards for the grade level/course. The complete list of standards for the grade level/course can be found at NYS Next Generation Mathematics Learning Standards.

Grade 7 Snapshot

Standards New to Grade 7

NY-7.SP.1 Construct and interpret box-plots, find the interquartile range, and determine if a data point is an outlier (Box-plots are no longer introduced in grade 6). Students are not expected to construct box-plots that include outliers in the data, but they are expected to interpret box-plots that may contain outliers.

Standards Moved from Grade 7

7.SP.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. Moved to grade 6 (NY-6.SP.1b).

7.SP.2 Moved generate multiple samples to grade 6 (NY-6.SP.1c). Merged "use data from a random sample to draw inferences about a population with an unknown characteristic of interest" into standard NY-7.SP.4.

7.SP.5-7b Probability of simple events; these standards were moved to grade 6 (NY-6.SP.6, 7, 8, 8a, 8b).

Highlights/Instructional Considerations

NY-7.RP.1 Problems may include ratios of lengths, areas, and other quantities measured in like or different units, including across measurement systems.

NY-7.RP.2a Students may utilize a strategy of their choice when deciding whether two quantities are in a proportional relationship.

NY-7.RP.3 Percent problems include simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, and percent error.

NY-7.NS.3 Computations with rational numbers extend the rules for manipulating fractions to complex fractions.

NY-7.EE.4 Solving equations that contain variables on both sides is not an expectation in grade 7.

NY-7.EE.4a *Leading to* may require students to simplify or combine like terms on the same side of the equation before it is in the form stated in the standard.

NY-7.EE.4b Added $px + q \geq r$ and $px + q \leq r$; *Leading to* may require students to simplify or combine like terms on the same side of the equation before it is in the form stated in the standard.

NY-7.G.2 Draw triangles when given measures of angles and/or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

NY-7.G.3 Plane sections are parallel or perpendicular to the base of right rectangular prisms and right rectangular pyramids.

NY-7.G.4 Students are applying the formulas for the area and circumference of a circle to solve problems, no informal derivation of relationship between circumference and area of a circle. Students are not expected to calculate the radius of a circle given its area.

NY-7.G.5 Solving equations for an unknown angle in a figure will involve linear expressions on one side of the equation. Solving equations that contain variables on both sides is not an expectation in grade 7.

NY-7.G.6 Quadrilaterals is replaced with trapezoids and the inclusive definition of trapezoid will be utilized, which implies parallelograms are included; surface area problems involve right prisms and right pyramids composed of triangles and trapezoids; volume problems involve right triangular prisms and right rectangular prisms; right prisms include cubes.

NY-7.SP.3 Students do not need to measure the difference between the centers by expressing it as a multiple of a measure of variability, they are informally assessing the degree of visual overlap of two quantitative data distributions.

NY-7.SP.4 Measures of center are mean, median, and mode. The measures of variation include range and the interquartile range.