

Mathematics: Grade 8

The Number System NS

1a Identify π as an irrational number. LC.8.NS.A.1A

1b Round irrational numbers to the hundredths place. LC.8.NS.A.1B

2 Use approximations of irrational numbers to locate them on a number line. LC.8.NS.A.2

Expressions and Equations EE

1 Use properties of integer exponents to produce equivalent expressions. LC.8.EE.A.1

2 Find the square roots of perfect squares and cube roots of whole numbers less than 100. LC.8.EE.A.2

3 Rewrite very large or very small quantities as a single digit times an integer power of 10. LC.8.EE.A.3

4a Convert a number expressed in scientific notation as number in standard form for numbers no greater than 10,000. LC.8.EE.A.4A

4b Perform operations with numbers expressed in scientific notation. LC.8.EE.A.4B

5 Represent proportional relationships on a line graph. LC.8.EE.B.5

6a Write the equation of a line passing through the origin as $y = mx$. LC.8.EE.B.6A

6b Write the equation of a line intercepting the y-axis at b as $y = mx + b$. LC.8.EE.B.6B

7 Solve linear equations with 1 variable. LC.8.EE.C.7

8a Solve systems of two linear equations in two variables and graph the results. LC.8.EE.C.8A

8b Solve real world and mathematical problems leading to two linear equations in two variables. LC.8.EE.C.8B

Functions

1 Distinguish between functions and non-functions, using equations, graphs, or tables. LC.8.F.A.1

2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For

example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change. [LC.8.F.A.2](#)

3 Given two graphs, describe the function as linear and not linear. [LC.8.F.A.3](#)

4 Identify the rate of change (slope) and initial value (y-intercept) from graphs. [LC.8.F.B.4](#)

5a Given a verbal description of a situation, create or identify a graph to model the situation. [LC.8.F.B.5A](#)

5b Given a graph of a situation, generate a description of the situation. [LC.8.F.B.5B](#)

5c Describe or select the relationship between the two quantities Given a line graph of a situation. [LC.8.F.B.5C](#)

Geometry [G](#)

1a Recognize a rotation, reflection, or translation of a figure. [LC.8.G.A.1A](#)

1b Recognize that lengths of line segments and measures of angles do not change when rotated, reflected or translated. [LC.8.G.A.1B](#)

1c Recognize that lines are taken to lines and parallel lines are taken to parallel lines when rotated, reflected or translated. [LC.8.G.A.1C](#)

2 Recognize congruent and similar figures. [LC.8.G.A.2](#)

3 Identify a rotation, reflection, or translation of a plane figure when given coordinates. [LC.8.G.A.3](#)

4a Recognize congruent and similar figures. [LC.8.G.A.4A](#)

4b Given two similar two-dimensional figures, show or describe a sequence that exhibits the similarity between them. [LC.8.G.A.4B](#)

5 Use angle relationships to find the value of a missing angle. [LC.8.G.A.5](#)

6 Create a model of the Pythagorean Theorem using areas of squares with a right triangle whose side lengths are 3, 4 and 5 units. [LC.8.G.B.6](#)

7a Apply the Pythagorean theorem to determine lengths/distances in real-world situations. [LC.8.G.B.7A](#)

7b Find the hypotenuse of a two-dimensional right triangle (Pythagorean Theorem). [LC.8.G.B.7B](#)

7c Find the missing side lengths of a two-dimensional right triangle (Pythagorean Theorem). [LC.8.G.B.7C](#)

8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system. **LC.8.G.B.8**

9 Apply the formula to find the volume of 3-dimensional shapes (i.e., cubes, spheres, and cylinders). **LC.8.G.C.9**

**Statistics and
Probability** **SP**

1a Graph bivariate data using scatter plots and identify possible associations between the variables. **LC.8.SP.A.1A**

1b Using box plots and scatter plots, identify data points that appear to be outliers. **LC.8.SP.A.1B**

1c Analyze displays of bivariate data to develop or select appropriate claims about those data. **LC.8.SP.A.1C**

2 Distinguish between a linear and non-linear association when analyzing bivariate data on a scatter plot. **LC.8.SP.A.2**

3 Interpret the slope and the y-intercept of a line in the context of a problem. **LC.8.SP.A.3**

4 Construct a two-way table summarizing data on two categorical variables collected from the same subjects; identify possible association between the two variables. **LC.8.SP.A.4**
