Alabama Mathematics AAS

Grade 8 (AAS)

Number Systems and Operations

Understand that the real number system is composed of rational and irrational numbers.

1 Add and subtract fractions with like denominators (e.g., halves, thirds, fourths, tenths). M.AAS.8.1

2 Add and subtract decimals to the hundredths place. M.AAS.8.1A

3 Convert a fraction with a denominator of 100 to a decimal. M.AAS.8.1B

4 Compare quantities represented as decimals in real-world examples to the hundredths place. M.AAS.8.2

Algebra and Functions

Apply concepts of integer exponents and radicals.

5 Calculate the square of numbers 1 through 10. M.AAS.8.4

6 Find the square root of the perfect squares up to 100. M.AAS.8.5

7 Identify irrational numbers as nonperfect squares (e.g., discriminate between perfect and non-perfect squares). M.AAS.8.6

Analyze the relationship between proportional and nonproportional situations.

8 Using a real-world scenario, match a table with its graph. Identify proportional or nonproportional relationships. M.AAS.8.8

Analyze and solve linear equations and systems of two linear equations.

9 Solve two-step linear equations where coefficients are less than 10 and answers are integers. M.AAS.8.12

Explain, evaluate, and compare functions.

10 Determine whether a relation is a function given a graph or a table. M.AAS.8.13

11 Identify linear and nonlinear functions graphically. M.AAS.8.15

Use functions to model relationships between quantities.

12 Given a simple scatter plot of points in a straight line, describe the relationship between the two quantities. M.AAS.8.17

Data Analysis, Statistics, and Probability

Investigate patterns of association in bivariate data.

(Standards addressed in grade before)

Geometry and Measurement

Understand congruence and similarity using physical models or technology.

13 Identify 3 different transformations (e.g., reflection, rotation, translation). M.AAS.8.22

14 Recognize the reflection (across the x- or y-axis) and translation (across quadrants) of a two- dimensional figure on a coordinate plane (limited to non-equilateral rectangles and triangles). M.AAS.8.23

Analyze parallel lines cut by a transversal.

15 Compare any angle to a right angle using greater than, less than, or congruent to the right angle. M.AAS.8.25

Understand and apply the Pythagorean Theorem.

16 Identify vertical angles given two parallel lines cut by a transversal. M.AAS.8.26

17 Use the Pythagorean Theorem to find the hypotenuse when given the measures of two legs in a real-world context. Limit to Pythagorean triples. M.AAS.8.27

Solve realworld and mathematical problems involving volume of cylinders, cones, and spheres.

18 Use the formulas for perimeter, area, and volume to solve real-world and mathematical problems (where volume problems are limited to finding the volume of cylinders and rectangular prisms). M.AAS.8.30