

ARKANSAS ALIGNMENT FOR GRADES 6-8 MATH

STRUCTURED FOR RIGOR.
DESIGNED FOR SUCCESS.

Arkansas Standards Alignment Overview

The summary below shows how Cignition's math program **aligns with Arkansas mathematics standards.** Virtual inquiry-based lessons immerse students in open-ended tasks that build problem-solving, reasoning, and communication skills. These engaging standards-aligned lessons advance academic goals and boost student outcomes.

On the next page, each instructional domain is clearly broken out, along with the relevant standard codes and brief descriptions that show how these standards are addressed in our tutoring sessions.

Following the standards overview, you'll find a link to a sample lesson, which provides a closer look at how these standards are brought to life in our virtual tutoring sessions.

Number Concepts & Computations (NCC)

- **6.NCC.1-13:** Plot & compare rational numbers, absolute value, fraction ÷ fraction, multi-digit ±×÷ decimals, GCF/LCM & distributive property.
- **7.NCC.1-9:** Additive inverses, rational operations with order of operations, repeating decimals, multi-step real-world problems.
- **8.NCC.1-8:** Classify rational/irrational, scientific notation ±×÷, integer exponents, square/cube roots.

Proportional Relationships (PR)

- **6.PR.1-5:** Ratio language, unit rates, tables/graphs for missing values, percent of quantity.
- **7.PR.1-7:** Constant of proportionality, unit rates with complex fractions, percent increase/decrease, compare representations, $y = mx$.

Functions (FN)

- **8.FN.1-9:** Define functions, identify representations, interpret slope as unit rate, compare linear rates, determine/explain slope & intercept (including real-world context), prove slope constant via similar triangles, distinguish linear/nonlinear, analyze/sketch graphs.

Algebra (ALG)

- **6.ALG.1-8:** Write/evaluate expressions, generate equivalents with properties, solve/graph one-step equations/inequalities.
- **7.ALG.1-5:** Add/subtract/factor linear expressions, solve two-step eq/ineq, model variable relationships.
- **8.ALG.1-3:** Solve linear equations/inequalities with rational coefficients, solve systems of linear equations (graphical & algebraic methods).

Geometry & Measurement (GM)

- **6.GM.1-7:** Area of polygons, volume & surface area of prisms, coordinate distances, metric/customary conversions.
- **7.GM.1-6:** Circle circumference/area, surface area/prism volume, cross-sections, angle relationships, scale drawings.
- **8.GM.1-11:** Volume & surface area of cylinders/cones/spheres, Pythagorean Theorem & distance, transformations & similarity on coordinate plane.

Statistics & Probability (SP)

- **6.SP.1-9:** Statistical/non-statistical questions, mean/median, range/IQR, histograms & box plots, relative frequency.
- **7.SP.1-10:** Circle graphs, compare data sets, random samples & inference, probability including compound events.
- **8.SP.1-6:** Analyze bivariate data using scatterplots & lines of best fit, relative-frequency two-way tables, theoretical vs experimental compound probability.

Sample Lesson - Integer Operations