

**ADAMS COUNTY/OHIO VALLEY SCHOOL DISTRICT
POWER STANDARDS (INDICATORS)**



**MATH
GRADE SEVEN**

Standard – Number, Number Sense and Operations

Use order of operations and properties to simplify numerical expressions involving integers, fractions, decimals, absolute value, exponents and square roots.

Explain the meaning and effect of adding, subtracting, multiplying and dividing integers; e.g., how adding two integers can result in a lesser value.

Solve problems using the appropriate form of a rational number (fraction, decimal or percent).

Standard – Measurement

Solve problems involving proportional relationships and scale factors; e.g., scale models that require unit conversions within the same measurement system.

Convert units of area and volume within the same measurement system using proportional reasoning and a reference table when appropriate; e.g., square feet to square yards, cubic meters to cubic centimeters.

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Standard – Geometry

Use, demonstrate, and apply understanding of the properties of triangles. For example: (a) Use Pythagorean Theorem to solve problems involving right triangles. (b) Use triangle angle sum relationships to solve problems. (c) Congruent or similar triangles to solve problems involving missing lengths and angle measures. (d) Use scale factors for similar figures to solve problems using proportional reasoning.

Standard – Patterns, Functions and Algebra

Represent and analyze patterns, rules and functions with words, tables, graphs and simple variable expressions.

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Standard – Data Analysis and Probability

Read, create and interpret box-and-whisker plots, stem-and-leaf plots, and other types of graphs, when appropriate. Analyze a set of data by using and comparing combinations of measures of center (mean, mode, median) and measures of spread (range, quartile, interquartile range), and describe how the inclusion or exclusion of outliers affects those measures.

Analyze how decisions about graphing affect the graphical representation; e.g., scale, size of classes in a histogram, number of categories in a circle graph.

Compute probabilities of compound events; e.g., multiple coin tosses or multiple rolls of number cubes, using such methods as organized lists, tree diagrams and area models.