

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



**MATH  
GRADE TEN**

**Standard – Number, Number Sense and Operation**

Connect physical, verbal and symbolic representations of irrational numbers; e.g., construct  $\sqrt{2}$  as a hypotenuse or on a number line.

**Standard – Measurement**

Explain and give examples of how a small error in measurement may lead to a large error in calculated results and how the same absolute error can be problematic in one situation but not in another.

**Standard – Geometry and Spatial Sense**

Formally define and explain key aspects geometric figures, including: interior and exterior angles of polygons; segments related to triangles (median, altitude, midsegment); circles (radius, diameter, chord, circumference, major arc, minor arc, sector, segment, inscribed angle).

Make, test and establish the validity of conjectures about geometric properties and relationships using counterexample, inductive and deductive reasoning, and paragraph or two-column proof, including: prove the Pythagorean Theorem; prove theorems involving triangle similarity and congruence; prove theorems involving properties of lines, angles, triangles and quadrilaterals; test a conjecture using basic constructions made with a compass and straightedge or technology. Recognize and explain the necessity for certain terms to remain undefined, such as point, line and plane.

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**Standard – Patterns, Functions, and Algebra**

Define function formally and with  $f(x)$  notation.

Solve equations and formulas for a specified variable; e.g., express the base of a triangle in terms of the area and height.

Solve simple linear and nonlinear equations and inequalities having square roots as coefficients and solutions. Solve equations and inequalities having rational expressions as coefficients and solutions, including linear systems.

Recognize and explain that the slopes of parallel lines are equal and the slopes of perpendicular lines are negative reciprocals. Solve real-world problems that can be modeled using linear, quadratic, exponential, or square root functions.

**Standard – Data Analysis**

Describe measures of center and the range verbally, graphically and algebraically.

Represent and analyze bivariate data using appropriate graphical displays (scatterplots, parallel box-and-whisker plots, histograms with more than one set of data, tables, charts, spreadsheets) with and without technology.