Grade 8

As PA transitions to the PA Core Standards, the focus of Grade 8 instruction needs to shift:

Less emphasis on:	More emphasis on:
	Standards for Mathematical Practice • Describe mathematical "habits of mind" • Standards for mathematical proficiency: reasoning, problem solving, modeling, decision making, and engagement • Connect with content standards in each grade
Numbers & Operations • Modeling and comparing rational numbers • Using ratio and proportion • Appling GCF and LCM • Operations with rational numbers • Evaluating numerical expressions	**Numbers & Operations** • Working with radicals and integer exponents • Operations with and using numbers in scientific notation • Using rational numbers to approximate irrational numbers
Measurement • Performing conversions within the metric and customary system	**Measurement**
Geometry • Finding area, surface area and volume	**Geometry** • Understanding congruence and similarity using rotations, reflections and translations • Using informal arguments to establish facts about angles

The purpose of this document is to provide a summary of changes in emphasis as Pennsylvania transitions from the PA Academic Standards to the PA Core Standards. This is not intended to be a curriculum guide or is it inclusive of all grade levels standards - only to identify shifts in emphasis of instruction.

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Algebraic Concepts • Finding missing elements in patterns • Using the concept of equality to demonstrate an understanding of the inverse properties of numbers & the properties of equality	**Algebraic Concepts** • Defining, evaluating and comparing functions • Using & solving linear equations with rational coefficients • Constructing function models (function notation is not required) • Comparing two functions represented in different ways • Interpreting rate as slope • Using equations of linear models to solve problems • Analyzing and solving systems of linear equations
Data Analysis & Probability • Using sampling techniques to gather data • Comparing data sets graphically and numerically • Stem-and-leaf & box-and-whisker plots • Effects of extreme values • Finding probability, combinations and permutations • Finding missing elements in patterns	**Data Analysis & Probability** • Construct and interpret scatter plots for bivariate data • Informally fit a line to data that has a linear association • Displaying frequencies and relative frequencies in a two way table and understanding patterns of association • Analyzing and solving systems of linear equations

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