

A Correlation of

enVisionmath[®]2.0

SCOTT FORESMAN • ADDISON WESLEY

Grades 6-8

©2017



to the

Pennsylvania Core Standards in Mathematics

Grades 6-8



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Introduction

enVisionmath2.0 is all grown up! New **enVisionmath2.0** for grades 6 through 8 empowers every middle school math teacher and learner. Prioritize learning, emphasize content connections, and invite in-depth student exploration on major topics with innovative new content organization focused on clusters of Common Core standards within each grade. Get to know the new enVisionmath2.0 program. Fully powered to support print, blended, and 1:1 digital learning experiences.

This document demonstrates how **enVisionmath2.0** grades 6-8, ©2017, aligns to the Pennsylvania Core Standards, Grades **6-8**. Correlation references are to the lessons of **enVisionmath2.0** .

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Pennsylvania Academic Standards for Mathematics Grade 6	enVisionmath2.0, ©2017 Grade 6
2.1.6 Numbers and Operations	
D) Ratios and Proportional Relationships	
CC.2.1.6.D.1 Understand ratio concepts and use ratio reasoning to solve problems. (M06.A-R.1.1.1, M06.A-R.1.1.2, M06.A-R.1.1.3, M06.A-R.1.1.4, M06.A-R.1.1.5)	5-1 Understand Ratios 5-2 Generate Equivalent Ratios 5-3 Compare Ratios 5-4 Represent and Graph Ratios 5-5 Understand Rates and Unit Rates 5-6 Compare Unit Rates 5-7 Solve Unit Rate Problems 5-8 Ratio Reasoning: Convert Customary Units 5-9 Ratio Reasoning: Convert Metric Units 5-10 Relate Customary and Metric Units 6-1 Understand Percent 6-2 Relate Fractions, Decimals, and Percents 6-3 Represent Percents Greater Than 100 or Less Than 1 6-4 Estimate to Find Percent 6-5 Find the Percent of a Number 6-6 Find the Whole Given a Part and the Percent
E) The Number System	
CC.2.1.6.E.1 Apply and extend previous understandings of multiplication and division to divide fractions by fractions.(M06.A-N.1.1.1)	1-4 Understand Division with Fractions 1-5 Divide Fractions by Fractions 1-6 Divide Mixed Numbers 1-7 Solve Problems with Rational Numbers
CC.2.1.6.E.2 Identify and choose appropriate processes to compute fluently with multi-digit numbers. (M06.A-N.2.1.1)	1-1 Fluently Add, Subtract, and Multiply Decimals 1-2 Fluently Divide Whole Numbers and Decimals
CC.2.1.6.E.3 Develop and/or apply number theory concepts to find common factors and multiples. (M06.A-N.2.2.1, M06.A-N.2.2.2, A1.1.1.2.1)	3-2 Find Greatest Common Factor and Least Common Multiple
CC.2.1.6.E.4 Apply and extend previous understandings of numbers to the system of rational numbers. (M06.A-N.3.1.1, M06.A-N.3.1.2, M06.A-N.3.1.3, M06.A-N.3.2.1, M06.A-N.3.2.2, M06.A-N.3.2.3)	2-1 Understand Integers 2-2 Represent Rational Numbers on the Number Line 2-3 Absolute Values of Rational Numbers 2-4 Represent Rational Numbers on the Coordinate Plane

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2.2.6 Algebraic Concepts	
B) Expressions & Equations	
CC.2.2.6.B.1 Apply and extend previous understandings of arithmetic to algebraic expressions. (M06.B-E.1.1.1, M06.B-E.1.1.2, M06.B-E.1.1.3, M06.B-E.1.1.4, M06.B-E.1.1.5)	3-4 Write Algebraic Expressions 3-5 Evaluate Algebraic Expressions 3-6 Generate Equivalent Expressions 3-7 Simplify Algebraic Expressions 4-2 Apply Properties of Equality 4-3 Write and Solve Addition and Subtraction Equations 4-4 Write and Solve Multiplication and Division Equations 4-5 Write and Solve Equations with Rational Numbers
CC.2.2.6.B.2 Understand the process of solving a one-variable equation or inequality and apply it to real-world and mathematical problems. (M06.B-E.2.1.1, M06.B-E.2.1.2, M06.B-E.2.1.3, M06.B-E.2.1.4)	4-1 Understand Equations and Solutions 4-2 Apply Properties of Equality 4-3 Write and Solve Addition and Subtraction Equations 4-4 Write and Solve Multiplication and Division Equations 4-5 Write and Solve Equations with Rational Numbers 4-6 Understand and Write Inequalities 4-7 Solve Inequalities
CC.2.2.6.B.3 Represent and analyze quantitative relationships between dependent and independent variables. (M06.B-E.3.1.1, M06.B-E.3.1.2)	4-8 Understand Dependent and Independent Variables 4-9 Use Patterns to Write and Solve Equations 4-10 Relate Tables, Graphs, and Equations
2.3.6 Geometry	
A) Geometry	
CC.2.3.6.A.1 Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume. (M06.C-G.1.1.1, M06.C-G.1.1.2, M06.C-G.1.1.3, M06.C-G.1.1.4, M06.C-G.1.1.5, M06.C-G.1.1.6)	7-1 Find Areas of Parallelograms and Rhombuses 7-2 Solve Triangle Area Problems 7-3 Find Areas of Trapezoids and Kites 7-4 Find Areas of Polygons 7-5 Represent Solid Figures Using Nets 7-6 Find Surface Areas of Prisms 7-7 Find Surface Areas of Pyramids 7-8 Find Volume with Fractional Edge Lengths

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2.4.6 Measurement, Data, and Probability	
B) Statistics and Probability	
<p>CC.2.4.6.B.1 Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions. (M06.D-S.1.1.1, M06.D-S.1.1.2, M06.D-S.1.1.3, M06.D-S.1.1.4)</p>	<p>8-1 Recognize Statistical Questions 8-2 Summarize Data Using Mean, Median, and Mode 8-3 Display Data in Box Plots 8-4 Display Data in Frequency Tables and Histograms 8-5 Summarize Data Using Measures of Variability 8-6 Choose Appropriate Statistical Measures 8-7 Summarize and Compare Data Distributions</p>

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2.1.7 Numbers and Operations	
D) Ratios and Proportional Relationships	
CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems. M07.A-R.1.1.1 M07.A-R.1.1.2 M07.A-R.1.1.3 M07.A-R.1.1.4 M07.A-R.1.1.5 M07.A-R.1.1.6	2-3 Understand Proportional Relationships: Equivalent Ratios 2-4 Describe Proportional Relationships: Constant of Proportionality 2-5 Graph Proportional Relationships 2-6 Apply Proportional Reasoning to Solve Problems 3-1 Analyze Percents of Numbers 3-2 Connect Percent and Proportion 3-3 Represent and Use the Percent Equation 3-4 Solve Percent Change and Percent Error Problems 3-5 Solve Markup and Markdown Problems 3-6 Solve Simple Interest Problems 6-1 Populations and Samples 6-3 Draw Inferences About Populations
E) The Number System	
CC.2.1.7.E.1 Apply and extend previous understandings of operations with fractions to operations with rational numbers. M07.A-N.1.1.1 M07.A-N.1.1.2 M07.A-N.1.1.3	1-2 Understand Rational Numbers 1-3 Add Integers 1-4 Subtract Integers 1-5 Add and Subtract Rational Numbers 1-6 Multiply Integers 1-7 Multiply Rational Numbers 1-8 Divide Integers 1-9 Divide Rational Numbers 1-10 Solve Problems with Rational Numbers
2.2.7 Algebraic Concepts	
B) Expressions & Equations	
CC.2.2.7.B.1 Apply properties of operations to generate equivalent expressions. M07.B-E.1.1.1	4-2 Understand Linear Expressions 4-3 Simplify Linear Expressions 4-4 Expand Linear Expressions 4-5 Factor Linear Expressions 4-6 Add Linear Expressions 4-7 Subtract Linear Expressions 4-8 Analyze Equivalent Expressions

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<p align="center">Pennsylvania Academic Standards for Mathematics Grade 7</p>	<p align="center">enVisionmath2.0, ©2017 Grade 7</p>
<p>CC.2.2.7.B.3 Model and solve real world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations. M07.B-E.2.1.1 M07.B-E.2.2.1 M07.B-E.2.2.2 M07.B-E.2.3.1 A1.1.1.4.1</p>	<p>1-1 Understand Integers and Absolute Value 1-10 Solve Problems with Rational Numbers 2-1 Connect Ratios, Rates, and Unit Rates 2-2 Determine Unit Rates with Ratios of Fractions 4-1 Write and Evaluate Algebraic Expressions 5-1 Write Two-Step Equations 5-2 Solve Two-Step Equations 5-3 Solve Equations Using the Distributive Property 5-4 Solve Inequalities Using Addition or Subtraction 5-5 Solve Inequalities Using Multiplication or Division 5-6 Graph Solutions of Inequalities 5-7 Write Two-Step Inequalities 5-8 Solve Two-Step Inequalities 5-9 Solve Multi-Step Inequalities 6-1 Populations and Samples 6-3 Draw Inferences About Populations 7-1 Understand Likelihood and Probability 7-4 Find Probabilities of Simple Events 7-6 Find Probabilities of Compound Events 8-5 Solve Problems Involving Circumference of a Circle 8-6 Solve Problems Involving Area of a Circle 8-7 Describe Cross Sections 8-8 Solve Problems Involving Surface Area 8-9 Solve Problems Involving Volume</p>
<p>2.3.7 Geometry</p>	
<p>A) Geometry</p>	
<p>CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume. M07.C-G.2.1.1 M07.C-G.2.1.2 M07.C-G.2.2.1 M07.C-G.2.2.2</p>	<p>8-1 Solve Problems Involving Scale Drawings 8-2 Draw Geometric Figures 8-3 Draw Triangles with Given Conditions Lesson PA-1 The Triangle Inequality Theorem 8-4 Solve Problems using Angle Relationships 8-5 Solve Problems Involving Circumference of a Circle 8-6 Solve Problems Involving Area of a Circle 8-8 Solve Problems Involving Surface Area 8-9 Solve Problems Involving Volume</p>

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CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them. M07.C-G.1.1.1 M07.C-G.1.1.2 M07.C-G.1.1.3 M07.C-G.1.1.4	8-2 Draw Geometric Figures 8-3 Draw Triangles with Given Conditions 8-4 Solve Problems using Angle Relationships Lesson PA-2 Angles, Lines, and Transversals 8-5 Solve Problems Involving Circumference of a Circle 8-6 Solve Problems Involving Area of a Circle 8-7 Describe Cross Sections 8-8 Solve Problems Involving Surface Area 8-9 Solve Problems Involving Volume
2.4.7 Measurement, Data, and Probability	
B) Statistics and Probability	
CC.2.4.7.B.1 Draw inferences about populations based on random sampling concepts. M07.D-S.1.1.1 M07.D-S.1.1.2	6-1 Populations and Samples 6-2 Biased and Unbiased Samples 6-3 Draw Inferences About Populations 6-4 Compare Populations Using Data Displays 6-5 Compare Populations Using Statistical Measures
CC.2.4.7.B.2 Draw informal comparative inferences about two populations. M07.D-S.2.1.1	6-4 Compare Populations Using Data Displays 6-5 Compare Populations Using Statistical Measures
CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models. M07.D-S.3.1.1 M07.D-S.3.2.1 M07.D-S.3.2.2 M07.D-S.3.2.3 A1.2.3.3.1	7-1 Understand Likelihood and Probability 7-2 Connect Relative Frequency and Experimental Probability 7-3 Represent Sample Spaces 7-4 Find Probabilities of Simple Events 7-5 Determine Outcomes of Compound Events 7-6 Find Probabilities of Compound Events 7-7 Simulate Compound Events

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2.1.8 Numbers and Operations	
E) The Number System	
CC.2.1.8.E.1 Distinguish between rational and irrational numbers using their properties. M08.A-N.1.1.1 M08.A-N.1.1.2 A1.1.1.1.1 A1.1.1.1.2	1-1 Rational Numbers as Decimals 1-2 Understand Irrational Numbers
CC.2.1.8.E.4 Estimate irrational numbers by comparing them to rational numbers. M08.A-N.1.1.3 M08.A-N.1.1.4 M08.A-N.1.1.5 A1.1.1.1.1	1-3 Compare and Order Real Numbers
2.2.8 Algebraic Concepts	
B) Expressions & Equations	
CC.2.2.8.B.1 Apply concepts of radicals and integer exponents to generate equivalent expressions. M08.B-E.1.1.1 M08.B-E.1.1.2 M08.B-E.1.1.3 M08.B-E.1.1.4 A1.1.1.3.1	1-4 Evaluate Square Roots and Cube Roots 1-5 Solve Equations Using Square Roots and Cube Roots 1-6 Understand Integer Exponents 1-7 Use Properties of Integer Exponents 1-8 Use Powers of 10 to Estimate Quantities 1-9 Understand Scientific Notation 1-10 Operations with Numbers in Scientific Notation 8-1 Find Surface Area of Three-Dimensional Figures 8-2 Find Volume of Cylinders 8-3 Find Volume of Cones 8-4 Find Volume of Spheres
CC.2.2.8.B.2 Understand the connections between proportional relationships, lines, and linear equations. M08.B-E.2.1.1 M08.B-E.2.1.2 M08.B-E.2.1.3 A1.2.1.2.2	2-5 Compare Proportional Relationships 2-6 Connect Proportional Relationships and Slope 2-7 Analyze Linear Equations: $y = mx$ 2-8 Understand the y-Intercept of a Line 2-9 Analyze Linear Equations: $y = mx + b$ 3-4 Construct Functions to Model Linear Relationships 4-2 Analyze Linear Associations 4-3 Use Linear Models to Make Predictions

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CC.2.2.8.B.3 Analyze and solve linear equations and pairs of simultaneous linear equations. M08.B-E.3.1.1 M08.B-E.3.1.2 M08.B-E.3.1.3 M08.B-E.3.1.4 M08.B-E.3.1.5 A1.1.2.1.1 A1.1.2.2.1 A1.1.2.2.2	2-1 Collect Like Terms to Solve Equations 2-2 Solve Equations with Variables on Both Sides 2-3 Solve Multi-Step Equations 2-4 Equations with No Solutions or Infinitely Many Solutions 5-1 Estimate Solutions by Inspection 5-2 Solve Systems by Graphing 5-3 Solve Systems by Substitution 5-4 Solve Systems by Elimination
(C) Functions	
CC.2.2.8.C.1 Define, evaluate, and compare functions. M08.B-F.1.1.1 M08.B-F.1.1.2 M08.B-F.1.1.3 A1.1.2.1.1 A1.2.1.1.2 A1.2.1.2.1 A1.2.1.2.2	3-1 Understand Relations and Functions 3-2 Connect Representations of Functions 3-3 Compare Linear and Nonlinear Functions 3-4 Construct Functions to Model Linear Relationships 3-5 Intervals of Increase and Decrease 3-6 Sketch Functions From Verbal Descriptions
CC.2.2.8.C.2 Use concepts of functions to model relationships between quantities. M08.B-F.2.1.1 M08.B-F.2.1.2 A1.1.2.1.3 A1.2.1.1.1 A1.2.1.2.2 A1.2.2.1.3 A1.2.2.1.4	3-1 Understand Relations and Functions 3-2 Connect Representations of Functions 3-3 Compare Linear and Nonlinear Functions 3-4 Construct Functions to Model Linear Relationships 3-5 Intervals of Increase and Decrease 3-6 Sketch Functions From Verbal Descriptions 4-2 Analyze Linear Associations 4-3 Use Linear Models to Make Predictions
2.3.8 Geometry	
A) Geometry	
CC.2.3.8.A.1 Apply the concepts of volume of cylinders, cones, and spheres to solve realworld and mathematical problems. M08.C-G.3.1.1 G.2.3.1.2	8-2 Find Volume of Cylinders 8-3 Find Volume of Cones 8-4 Find Volume of Spheres

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CC.2.3.8.A.2 Understand and apply congruence, similarity, and geometric transformations using various tools. M08.C-G.1.1.1 M08.C-G.1.1.2 M08.C-G.1.1.3 M08.C-G.1.1.4 G.1.2.1.1 G.1.2.1.4 G.2.2.1.1	6-1 Analyze Translations 6-2 Analyze Reflections 6-3 Analyze Rotations 6-4 Compose Transformations 6-5 Understand Congruent Figures 6-6 Describe Dilations 6-7 Understand Similar Figures 6-10 Angle-Angle Triangle Similarity
CC.2.3.8.A.3 Understand and apply the Pythagorean Theorem to solve problems. M08.C-G.2.1.1 M08.C-G.2.1.2 M08.C-G.2.1.3 G.2.1.1.1 G.2.1.2.1	7-2 Understand the Pythagorean Theorem 7-3 Understand the Converse of the Pythagorean Theorem 7-4 Apply the Pythagorean Theorem to Solve Problems 7-5 Find Distance in the Coordinate Plane
2.4.8 Measurement, Data, and Probability	
B) Statistics and Probability	
CC.2.4.8.B.1 Analyze and/or interpret bivariate data displayed in multiple representations. M08.D-S.1.1.1 M08.D-S.1.1.2 M08.D-S.1.1.3 A1.2.2.2.1	4-1 Construct and Interpret Scatter Plots 4-2 Analyze Linear Associations 4-3 Use Linear Models to Make Predictions 4-4 Interpret Two-Way Frequency Tables 4-5 Interpret Two-Way Relative Frequency Tables
CC.2.4.8.B.2 Understand that patterns of association can be seen in bivariate data utilizing frequencies. M08.D-S.1.2.1	4-2 Analyze Linear Associations 4-3 Use Linear Models to Make Predictions 4-4 Interpret Two-Way Frequency Tables 4-5 Interpret Two-Way Relative Frequency Tables