



# Yearly Overview

## PAP Mathematics 7

2020-2021

The curriculum for PAP Mathematics 7 includes all Grade 8 TEKS and the remaining appropriately aligned Grade 7 TEKS that were not taught in PAP Mathematics 6. The PAP Mathematics 7 curriculum is a compacted and accelerated curriculum. Student expectations from Grade 8 TEKS taught in PAP Mathematics 7 include: extending previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers; approximate the value of an irrational number, including pi and square roots of numbers less than 225, and locate that rational number approximation on a number line; convert between standard decimal notation and scientific notation; order a set of real numbers arising from mathematical and real-world contexts; use similar right triangles to develop an understanding that slope,  $m$ , given as the rate comparing the change in  $y$ -values to the change in  $x$ -values,  $(y_2 - y_1) / (x_2 - x_1)$ , is the same for any two points  $(x_1, y_1)$  and  $(x_2, y_2)$  on the same line; graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship; use data from a table or graph to determine the rate of change or slope and  $y$ -intercept in mathematical and real-world problem; represent linear proportional situations and linear non-proportional situations from mathematical and real world situations with tables, graphs, and equations in the form of  $y = kx$  or  $y = mx + b$ , where  $b \neq 0$ ; model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants; understand the relationships about angles in triangles and angles created when parallel lines are cut by a transversal; personal finance problems involving cost of loans and credit cards; and estimate costs of two-year and four-year college education.

## Semester 1

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### Term 1

- **Numbers and Operations**
    - Real Number Relationships, Order Real Numbers, Square Roots, and Scientific Notation
  - **Expressions, Equations, and Relationships**
    - One-variable, Two-Step Equations and Inequalities with Variables on Both Sides
      - Solving, Writing, and Modeling
  - **Proportionality**
    - Rates of Change and Slope
    - Graph Linear Proportional and Non-Proportional Relationships
      - Tables, Equations, and Graphs
    - Direct Variation
  - **Solving Systems of Equations by Graphing**
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### Term 2

- **Proportionality**
  - Linear Relationships Between Bivariate Sets of Data
  - Identify Functions
- **Two-Dimensional Shapes**
  - Dilations, Translations, Rotations, Reflections on a Coordinate Plane
- **Expressions, Equations, and Relationships**
  - Sum of the Angles of a Triangle
  - Parallel Lines Cut by a Transversal

**District PAP Grade 7 Review and Semester Exam**

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## Semester 2

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### Term 3

- **Expressions, Equations, and Relationships**
    - Pythagorean Theorem
    - Volume of Rectangular and Triangular Prisms and Pyramids
    - Volume of Cylinders, Cones, and Spheres
    - Lateral and Total Surface Area of Prisms
  - **Probability**
    - Simple and Compound Events
    - Experimental and Theoretical Probability
    - Qualitative and Quantitative Predictions
    - Sample Spaces and Tree Diagrams
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### Term 4

- **Measurement and Data**
  - Inferences and Comparing Populations
  - Scatterplots
  - Trend Lines
  - Determine Mean Absolute Deviation
- **Personal Financial Literacy**
  - Sales and Income Tax
  - Incentives, Sales Rebates, and Coupons
  - Personal Budgets and Savings
  - Simple and Compound Interest
  - Investments for College and Retirement
  - Benefits of Financial Responsibility

**STAAR Review and Grade 7 STAAR Test**

- **Personal Financial Literacy**
  - Calculate Cost of Repaying a Loan
  - Cost of Financial Irresponsibility
  - Estimate Cost of College

**District PAP Grade 7 Semester Exam**

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