



# Course Overview

High School | Math Problem Solving - Last Updated on April 2, 2025

## DESCRIPTION

### K-12 Content Area | Mission & Philosophy Statement

- With confidence and perseverance, young people can tackle complex and novel mathematical challenges, becoming skilled problem solvers who take ownership over their learning process.
- Young people possess the ability to reason mathematically, make conjectures, solve problems and build understanding through effective dialogue and collaboration.
- Learners exhibit critical inquiry through the deliberate asking of questions and the integration of conceptual understanding, reasoning abilities, and procedural fluency.
- Strategically selecting materials, technology, and other resources support mathematical learning and aid in achieving mathematical goals. (NCTM, 2024)

### Course Description

This course combines the ideas mastered in algebra and geometry and then integrates new concepts of probability and statistics, to solve financial applications that occur in everyday life. Real-world problems in investing, credit, banking, auto insurance, mortgages, employment, income taxes, budgeting, and planning for retirement are solved by applying the relevant mathematics. Extensive use of project-based applications will be explored to utilize critical thinking skills required in everyday life to help the student to become a financially responsible adult.

## STANDARDS

### National Common Core - High School - Statistics and Probability

ID.A ID.B ID.C ID.A.1 ID.A.2 ID.A.3 ID.A.4 ID.B.5 ID.B.6 ID.B.6a

ID.B.6b ID.B.6c ID.C.7 ID.C.8 ID.C.9 IC.A IC.B IC.A.1 IC.A.2 IC.B.3

IC.B.4 IC.B.5 IC.B.6 CPA CP.B CPA.1 CPA.2 CPA.3 CPA.4 CPA.5

CP.B.7 CP.B.8 CP.B.9 MD.A MD.B MD.A.1 MD.A.2 MD.A.3 MD.A.4

MD.B.5 MD.B.6 MD.B.7 MD.B.5a MD.B.5b



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### COURSE OBJECTIVES

Specific objectives for this course are aligned to the Pennsylvania Grades Personal Finance Standards and the National Common Core High School Statistics and Probability Standards.

### ASSESSMENT TYPES

The following assessment types will be used during the course:

- Diagnostic Assessments
- Formative Assessments
- Summative Assessments

### SUGGESTED METHODS OF INSTRUCTION

Below is a list of suggested strategies for high-quality instruction in Mathematics:

- Instructional components outlined in the *Framework for Teaching by Charlotte Danielson*
- Teacher-Centered Instruction
- Inquiry-Based Learning
- Small Group Instruction
- Cooperative Learning
- Student-Centered/Constructivist Approach
- Project-Based Learning
- Flipped Classroom



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## RESOURCES

District Approved Program Resources	District Approved Supplemental Resources	District Approved Technology Resources
<ul style="list-style-type: none"> <li>Financial Algebra. <a href="https://www.nogp.org/math/financial-algebra/">https://www.nogp.org/math/financial-algebra/</a></li> <li>Khanacademy: Financial Literacy Course <a href="https://www.khanacademy.org/college-careers-math/financial-literacy">https://www.khanacademy.org/college-careers-math/financial-literacy</a></li> </ul>	<ul style="list-style-type: none"> <li>TI-Calculators 84Central Calculator Activities <a href="https://education.ti.com/en/84activitycentral/users/home">https://education.ti.com/en/84activitycentral/users/home</a></li> <li>Nearpod <a href="https://nearpod.com/">https://nearpod.com/</a></li> <li>Desmos <a href="https://www.desmos.com/">https://www.desmos.com/</a></li> <li>Khanacademy <a href="https://www.khanacademy.org/math/algebra2">https://www.khanacademy.org/math/algebra2</a></li> <li>Financial Algebra by R. Gerver. <a href="https://www.financialalgebra.com/resources">https://www.financialalgebra.com/resources</a></li> <li>ixL Online Learning Platform</li> <li>Financial Algebra: <a href="https://www.financialalgebra.com/">https://www.financialalgebra.com/</a></li> <li>Teacher created materials</li> </ul>	<ul style="list-style-type: none"> <li>TI84CE Graphing Calculators (with software programs)</li> <li>District Approved Technology</li> </ul>