# Whitehall-Coplay School District Syllabus

## Course Title: Consumer Mathematics

**DESCRIPTION OF COURSE**: Students will learn how to manage and solve personal finance problems. Students will understand mathematical operations and will use those skills to file income tax forms, apply for loans, reconcile checking accounts, and calculate gross and net pay. Moreover, they will analyze investments, insurance, and credit cards. Computer resources will be used to support and enhance student learning. Assessments will include the development of a working budget, projects, homework, class discussions, tests, and quizzes. Students will take the Consumer Math final exam at the end of the course.

| REQUIRED TOPICS OF STUDY | SUGGESTED INSTRUCTIONAL TIME | STANDARDS/ ELIGIBLE CONTENT |
|---|---|---|
| 1. Gross Income | *2 weeks* | 15.6.12.D, |
| 2. Net Income and Taxes | *4 weeks* | 15.6.12.E |
| 3. Checking Accounts | *2 weeks* | 15.6.12.F, 15.6.12.H |
| 4. Savings Accounts | *4 weeks* | 15.6.12.F, 15.6.12.H, 15.6.12.I, 15.6.12.J |
| 5. Cash Purchases | *4 weeks* | 15.6.12.E, 15.6.12.H |
| 6. Charge Accounts and Credit Cards | *2 weeks* | 15.6.12.F, 15.6.12.H, 15.6.12.K, 15.6.12.L |
| 7. Loans | *4 weeks* | 15.6.12.H, 15.6.12.I |
| 8. Automobile Transportation | *4 weeks* | 15.6.12.F |
| 9. Housing Costs | *4 weeks* | 15.6.12.F, 15.6.12.O |
| 10. Insurance and Investments | *4 weeks* | 15.6.12.I, 15.6.12.N, 15.6.12.O, 15.6.12.P, 15.6.12.Q, 15.6.12.R, 15.6.12.S |
| | | |
| 11. Review and Final Exam | *4 days* | All standards used throughout the course |

**RESOURCES: Mathematics With Business Applications, 3rd Edition, Glencoe/McGraw-Hill, 1993**

**Rev.: 06/2021**

# Consumer Math

## Scope & Sequence

**Unit 1:Gross Income (12 days)**

*Sec. 1-1* Hourly Pay
*Sec. 1-2* Overtime Pay
*Sec. 1-4* Piecework
*Sec. 1-5* Salary
*Sec. 1-6* Commission
Sec #1.7: Graduated Commission

**Unit 2: Net Income (12 days)**

Sec #2.1: Federal Income Tax (FIT)
Sec #2.2: State Income Tax
Sec #2.3: Graduated State Income Tax
Sec #2.4: Social Security and Medicare Tax
Sec #2.5 Group Health Insurance
Sec #2.6 Statement of Earnings

**Unit 3: Checking Accounts (11 days)**

Sec #4.1 Deposits
Sec #4.2 Writing Checks
Sec #4.3 Check Registers
Sec #4.4 Bank Statements
Sec #4-5 Reconciling the Bank Statement

*Supplemental Material:* On-Line Banking

**Unit 4: Savings Accounts (12 days)**

Sec #5.1 Deposits

Sec #5.2 Withdrawals
Sec #5.3 Account Statements
Sec #5.4 Simple Interest
Sec #5.5 Compound Interest
Sec #5.7 Daily Compounding
Sec #5.8 Annuities

**Unit 5: Cash Purchase (10 Days)**

Sec #6.1 Sales Tax
Sec #6.2: Total Purchase Price
Sec #6.3 Unit Pricing
Sec #6.4 Comparison Shopping
Sec #6.5 Coupons and Rebates
Sec #6.6 Markdown
Sec #6.7 Sale Price

**Unit 6: Charge Accounts and Credit Cards (7 Days)**

Sec #7.1 Account Statements
Sec #7.2 Finance Charge: Unpaid Balance Method
Sec #7.3 Finance Charge: Average Daily Balance (No New Purchases)
Sec #7.4 Finance Charge: Average Daily Balance (New Purchases Included)

**Unit 7: Loans (9 Days)**

Sec #8.1 Single Payment Loans
Sec #8.2 Installment Loans
Sec #8.3: Simple Interest Installment Loans
Sec #8.4: Installment Loans: Allocation of Monthly Payment
Sec #8.5: Paying Off Simple Interest Installment Loans
Sec #8.6: Determining the APR

**Unit 8: Vehicle Transportation (8 Days)**

Sec #9-1: Purchasing a New Vehicle
Sec #9-2: Dealer's Cost
Sec #9-3: Purchasing a Used Vehicle
Sec #9-4: Vehicle Insurance
Sec #9-5: Operating and Maintaining a Vehicle
Sec #9-6: Leasing a Vehicle
Sec #9-7: Renting a Vehicle
Supplemental Material: Purchasing a Vehicle Project

**Unit 9: Housing Costs (10 Days)**

Sec #10-1 Mortgage Costs
Sec #10-2 Monthly Payment and Total Interest
Sec #10-3 Closing Costs
Sec #10-4 The Monthly Payment
Sec #10-5 Real Estate Taxes
Sec #10-6 Homeowners Insurance
Sec #10-7 Homeowners Insurance Premium
Sec #10-8 Other Housing Costs

# WHITEHALL HIGH SCHOOL CURRICULUM MAP

**Course Name: Consumer Math** **Unit 1:** **Grade/Level: 11-12/HS**
**Course Number: 40462** **Gross Income**

**Standards:**
CC 2.1 HS D1 Interpret the structure of expressions to represent a quantity in terms of its context
CC 2.1 HS D2 Write expressions in equivalent forms to solve problems.
CC 2.1 HS D3 Extend the knowledge of arithmetic operations and apply to polynomials.
CC 2.2 HS D8 Apply inverse operations to solve equations or formulas for a given variable.
CC 2.2 HS D9 Use reasoning to solve equations and justify the solution method.
CC 2.2 HS D10 Represent, solve and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically.

**Big Idea(s):**
Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.
Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

**Essential Question(s):**
How is mathematics used to quantify, compare, represent, and model numbers?
How can mathematics support effective communication?
How are relationships represented mathematically?
How can expressions, equations and inequalities be used to quantify, solve, model and/or analyze mathematical situations?
What makes a tool and/or strategy appropriate for a given task?

| Number of Instructional Days | Concepts | Competencies and Skills | Key Vocabulary | Materials, Resources, Activities, Technology, Literacy Strategies | Eligible Content |
|---|---|---|---|---|---|
| 12 days | Gross Income<br><br>Hourly Pay<br><br>Overtime Pay | Perform arithmetic operations on equations.<br><br>Rewrite expressions.<br><br>Simplify/factor expressions involving polynomials. | Gross Income<br><br>Overtime Pay<br><br>Salary<br><br>Commission | *Supplemental Material on the following topics:*<br><br>*Weekly Time Card* | A2.1.2.1.2 Simplify/evaluate expressions involving positive and negative exponents and/or roots. |

| | | | | | |
|---|---|---|---|---|---|
| | | Use and/or explain reasoning while solving equations, and justify the solution method.<br><br>Determine how a change in one variable relates to a change in a second variable.<br><br>Use exponents, roots, and/or absolute values to represent equivalent forms or to solve problems.<br><br>Interpret functions in terms of the situations they model.<br><br>Create and/or analyze functions using multiple representations<br>(graph, table, and equations | Graduated Commission<br><br>equation<br><br>variables<br><br>break-even point | Combination of shared activities, quizzes, assessments.<br><br>Combination of IXL, Delta Math | A2.1.2.1.3 Simplify/evaluate expressions involving multiplying with exponents, powers of powers and powers of products.<br><br>A2.1.3.2.1 Determine how a change in one variable relates to a change in a second variable |

# WHITEHALL HIGH SCHOOL CURRICULUM MAP

**Course Name: Principles of Math** **Unit 2:** **Grade/Level: 11-12/HS**
**Course Number: 40410** **Net Income**

**Standards:**

CC 2.2 HS C2 Graph and analyze functions and use their properties to make connections between the different representations.
CC 2.2 HS C5 Construct and compare linear, quadratic and exponential models to solve problems.
CC 2.2 HS C6 Interpret functions in terms of the situation they model.
CC 2.2 HS D9 Use reasoning to solve equations and justify the solution method.
CC 2.2 HS D10 Represent, solve and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically.

**Big Idea(s):**
Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.
Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

**Essential Question(s):**
How is mathematics used to quantify, compare, represent, and model numbers?
How can mathematics support effective communication?
How are relationships represented mathematically?
How can expressions, equations and inequalities be used to quantify, solve, model and/or analyze mathematical situations?
What makes a tool and/or strategy appropriate for a given task?

| Number of Instructional Days | Concepts | Competencies and Skills | Key Vocabulary | Materials, Resources, Activities, Technology, Literacy Strategies | Eligible Content |
|---|---|---|---|---|---|
| 12 days | Net Income/Taxes | Perform arithmetic operations.<br><br>Create and/or solve equations (including literal, polynomial, rational, radical, exponential, and logarithmic) both algebraically and graphically. | average rate of change<br><br>compression<br><br>interval notation<br><br>maximum<br><br>minimum | 2.1 Federal Income Tax<br><br>2.2 State Income Tax<br><br>2.3 Graduated Income Tax<br><br>2.4 Social Security/Medicare Tax<br><br>2.5 Group Health Insurance | A2.1.2.1.2 Simplify/evaluate expressions involving positive and negative exponents and/or roots.<br><br>A2.1.2.1.3 Simplify/evaluate expressions involving multiplying with exponents, powers |

| | | | | | |
|---|---|---|---|---|---|
| | | Use and/or explain reasoning while solving equations, and justify the solution method.<br><br>Determine how a change in one variable relates to a change in a second variable.<br><br>Interpret functions in terms of the situations they model.<br><br>Create and/or analyze functions using multiple representations (graph, table, and equation).<br><br>Create a function and/or sequence that model a relationship between two quantities. | | Combination of shared activities, quizzes, assessments.<br><br>Combination of IXL, Delta Math | of powers and powers of products.<br><br>A2.1.3.1.4 Write, solve and/or apply linear or exponential growth or decay<br><br>A2.1.3.2.1 Determine how a change in one variable relates to a change in a second variable |

# WHITEHALL HIGH SCHOOL CURRICULUM MAP

**Course Name: Principles of Math** | **Unit 3:** | **Grade/Level: 11-12/HS**
**Course Number: 40410** | **Checking Accounts**

**Standards:**
CC 2.1 HS D1 Interpret the structure of expressions to represent a quantity in terms of its context
CC 2.1 HS D2 Write expressions in equivalent forms to solve problems.
CC 2.1 HS D3 Extend the knowledge of arithmetic operations and apply to polynomials.
CC 2.5 HS E11 Interpret the Reasonableness of a Solution to the Context of a Given Problem

**Big Idea(s):**
Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.
Patterns exhibit relationships that can be extended, described, and generalized.
Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.
Data can be modeled and used to make inferences.

**Essential Question(s):**
How is mathematics used to quantify, compare, represent, and model numbers?
How can mathematics support effective communication?
How are relationships represented mathematically?
How can expressions, equations and inequalities be used to quantify, solve, model and/or analyze mathematical situations?
What makes a tool and/or strategy appropriate for a given task?
What does it mean to estimate or analyze numerical quantities?

| Concepts | Competencies and Skills | Key Vocabulary | Number of Instructional Days | Materials, Resources, Activities, Technology, Literacy Strategies | Eligible Content |
|---|---|---|---|---|---|
| Deposits<br><br>Writing Checks<br><br>Bank Reconciliations | Perform arithmetic operations on polynomials.<br><br>Create and/or solve equations (including literal, | Deposits<br><br>Check Registers<br><br>Bank Statements<br><br>Reconcile | 10 days | 4.1 Deposits<br><br>4.2 Writing Checks<br><br>4.3 Check Registers | A2.1.3.1.1 Write and/or solve quadratic equations |

| | | | | | |
|---|---|---|---|---|---|
| | polynomial, rational, radical, exponential, and logarithmic) both algebraically and graphically.<br><br>Use and/or explain reasoning while solving equations, and justify the solution method.<br><br>Determine how a change in one variable relates to a change in a second variable.<br><br>Interpret functions in terms of the situations they model. | | | 4.4 Bank Statements<br><br>4.5 Reconciling the Bank Statement<br><br>Combination of shared activities, quizzes, assessments.<br><br>Combination of IXL, Delta Math | A2.2.2.1.2 Create, interpret and/or use the equation, graph or table of an exponential or logarithmic function<br><br>A2.1.3.2.1 Determine how a change in one variable relates to a change in a second variable |

# WHITEHALL HIGH SCHOOL CURRICULUM MAP

**Course Name: Principles of Math** | **Unit 4:** | **Grade/Level: 11-12/HS**
**Course Number: 40410** | **Savings Accounts**

**Standards:**
CC 2.1 HS D1 Interpret the structure of expressions to represent a quantity in terms of its context
CC 2.1 HS D2 Write expressions in equivalent forms to solve problems.
CC 2.2 HS A8 Simplify Algebraic Expressions Based on Algebraic Principles

**Big Idea(s):**
Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.
Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

**Essential Question(s):**
How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication?
How are relationships represented mathematically?
How can expressions, equations and inequalities be used to quantify, solve, model and/or analyze mathematical situations?
What makes a tool and/or strategy appropriate for a given task?

| Number of Instructional Days | Concepts | Competencies and Skills | Key Vocabulary | Materials, Resources, Activities, Technology, Literacy Strategies | Eligible Content |
|---|---|---|---|---|---|
| 11 Days | Deposits<br><br>Withdrawals<br><br>Account Statements<br><br>Simple Interest<br><br>Compound Interest | Perform arithmetic operations.<br><br>Create and/or solve equations (including literal, polynomial, rational, radical, exponential, and logarithmic) both algebraically and graphically. | Deposits<br><br>Withdrawals<br><br>Simple Interest<br><br>Compound Interest<br><br>Annuities | *Supplemental Material on the following topics:*<br><br>*Annuities Packet*<br><br>*Financial Fitness for Life*<br><br>5.1 Deposits<br><br>5.2 Withdrawals | A2.2.2.2.1 Identify or describe the effect of changing parameters within a family of functions |

| | | | | | |
|---|---|---|---|---|---|
| | | Use and/or explain reasoning while solving equations, and justify the solution method.<br><br>Construct and compare linear, quadratic, exponential, and logarithmic models to solve problems. | | 5.3 Account Statements<br><br>5.4 Simple Interest<br><br>5.5 Compound Interest<br><br>Combination/shared activities, quizzes, assessments.<br><br>Combination of IXL, Delta Math | |

# WHITEHALL HIGH SCHOOL CURRICULUM MAP

**Course Name: Principles of Math** **Unit 5:** **Grade/Level: 11-12/HS**
**Course Number: 40410** **Cash Purchases**

**Standards:**
CC 2.2 HS C1 Use the concept and notation of functions to interpret and apply them in terms of their context.
CC 2.2 HS C6 Interpret functions in terms of the situation they model.
CC 2.2 HS D1 Interpret the structure of expressions to represent a quantity in terms of its context.
CC 2.2 HS D2 Write expressions in equivalent forms to solve problems.
CC 2.2 HS D8 Apply inverse operations to solve equations or formulas for a given variable.
CC 2.1 HS F2 Apply and Extend the Properties of Exponents to solve problems

**Idea(s):**
Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.
Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

**Essential Question(s):**
How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication?
How are relationships represented mathematically?
How can expressions, equations and inequalities be used to quantify, solve, model and/or analyze mathematical situations?
What makes a tool and/or strategy appropriate for a given task?

| Number of Instructional Days | Concepts | Competencies and Skills | Key Vocabulary | Materials, Resources, Activities, Technology, Literacy Strategies | Eligible Content |
|---|---|---|---|---|---|
| 12 Days | Sales Tax<br><br>Total Purchase Price | Perform arithmetic operations. | Sales Tax<br><br>Total Purchase Price | *Supplemental Material on the following topics:*<br><br>*Financial Fitness for Life* | A2.1.3.1.2 Solve equations involving rational |

| | | | | | |
|---|---|---|---|---|---|
| | Unit Pricing<br><br>Markdown | Simplify/factor expressions involving.<br><br>Create and/or solve equations (including literal, polynomial, rational, radical, exponential, and logarithmic) both algebraically and graphically.<br><br>Use and/or explain reasoning while solving equations, and justify the solution method. | Unit Pricing<br><br>Coupon<br><br>Rebate<br><br>Markdown | 6.1 Sales Tax<br><br>6.2 Total Purchase Price<br><br>6.3 Unit Pricing<br><br>6.4 Comparison Shopping<br><br>6.5 Coupons and Rebates<br><br>6.6 Markdown<br><br>6.7 Sale Price<br><br>Combination of shared activities, quizzes, assessments.<br><br>Combination of IXL, Delta Math | and/or radical expressions<br><br>A2.2.1.1.4 Identify and/or determine the characteristics of an exponential, quadratic, or polynomial function |

# WHITEHALL HIGH SCHOOL CURRICULUM MAP

**Course Name: Principles of Math** | **Unit 6:** | **Grade/Level: 11-12/HS**
**Course Number: 40410** | **Charge Accounts and Credit Cards**

**Standards:**
CC 2.1 HS D1 Interpret the structure of expressions to represent a quantity in terms of its context
CC 2.1 HS D2 Write expressions in equivalent forms to solve problems.
CC 2.1 HS D3 Extend the knowledge of arithmetic operations and apply to polynomials.
CC 2.1 HS D4 Understand the relationship between zeros and factors of polynomials to make generalizations about functions and their graphs.

**Big Idea(s):**
Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.
Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

**Essential Question(s):**
How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication?
How are relationships represented mathematically?
How can expressions, equations and inequalities be used to quantify, solve, model and/or analyze mathematical situations?
What makes a tool and/or strategy appropriate for a given task?

| | | Competencies and Skills | Key Vocabulary | Materials, Resources, Activities, Technology, Literacy Strategies | Eligible Content |
|---|---|---|---|---|---|
| 7 Days | Account Statements<br><br>Average Daily Balance<br><br>Unpaid Balance | Perform arithmetic operations on polynomials. | Finance Charge<br><br>Unpaid Balance<br><br>Average Daily Balance | *Supplemental Material on the following topics:*<br><br>*Financial Fitness for Life* | A2.1.2.2.2 Simplify rational algebraic expressions |

| | | | | | |
|---|---|---|---|---|---|
| | | Create and/or solve equations (including literal, polynomial, rational, radical, exponential, and logarithmic) both algebraically and graphically.<br><br>Use and/or explain reasoning while solving equations, and justify the solution method.<br><br>Determine how a change in one variable relates to a change in a second variable.<br><br>Use the concept and notation of function to interpret and apply them in terms of their context.<br><br>Interpret functions in terms of the situations they model. | | 7.1 Account Statements<br><br>7.2 Finance Charge: Unpaid Balance Method<br><br>7.3 Finance Charge: Average Daily Balance Method (No New Purchases Included)<br><br>7.4 Finance Charge: Average Daily Balance Method (New Purchases Included)<br><br>Combination of shared activities, quizzes, assessments.<br><br>Combination of IXL, Delta Math | A2.1.3.1.2 Solve equations involving rational and/or radical expressions |

# WHITEHALL HIGH SCHOOL CURRICULUM MAP

**Course Name: Principles of Math** **Unit 7:** **Grade/Level: 11-12/HS**
**Course Number: 40410** **Loans**

**Standards:**
CC 2.2 HS C1 Use the concept and notation of functions to interpret and apply them in terms of their context.
CC 2.2 HS C3 Write functions or sequences that model relationships between two quantities.
CC 2.2 HS C5 Construct and compare linear, quadratic and exponential models to solve problems.
CC 2.2 HS C6 Interpret functions in terms of the situation they model.
CC 2.2 HS D2 Write expressions in equivalent forms to solve problems.
CC 2.2 HS D8 Apply inverse operations to solve equations or formulas for a given variable.

**Big Idea(s):**
Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.
Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

**Essential Question(s):**
How is mathematics used to quantify, compare, represent, and model numbers?
How can mathematics support effective communication?
How are relationships represented mathematically?
How can expressions, equations and inequalities be used to quantify, solve, model and/or analyze mathematical situations?
What does it mean to estimate or analyze numerical quantities?
What makes a tool and/or strategy appropriate for a given task?

| Number of Instructional Days | Concepts | Competencies and Skills | Key Vocabulary | Materials, Resources, Activities, Technology, Literacy Strategies | Eligible Content |
|---|---|---|---|---|---|
| 9 Days | Single Payment Loans<br><br>Installment Loans<br><br>Simple Interest<br><br>Monthly Payment<br><br>APR | Create and/or solve equations (including literal, polynomial, rational, radical, exponential, and logarithmic) both algebraically and graphically.<br><br>Use and/or explain reasoning while solving equations, and justify the solution method.<br><br>Interpret functions in terms of the situations they model.<br><br>Create and/or analyze functions using multiple representations (graph, table, and equation).<br><br>Create a function and/or sequence that models a | Single Payment Loans<br><br>Installment Loan<br><br>Simple Interest<br><br>Monthly Payment<br><br>APR | *Financial Fitness for Life*<br><br>8.1 Single Payment Loans<br><br>8.2 Installment Loans<br><br>8.3 Simple Interest Installment Loans<br><br>8.4 Installment Loans-Allocation of Monthly Payment<br><br>8.5 Paying off Simple Interest Installment Loans<br><br>8.6 Determining the APR<br><br>Combination of shared activities, quizzes, assessments. | A2.1.3.2.1 Determine how a change in one variable relates to a change in a second variable<br><br>A2.1.3.2.2 Use algebraic processes to solve a formula for a given variable<br><br>A2.2.1.1.4 Identify and/or determine the characteristics of an exponential, quadratic, or polynomial function |

| | | | | | |
|---|---|---|---|---|---|
| | | relationship between two quantities | | Combination of IXL, Delta Math | |

# WHITEHALL HIGH SCHOOL CURRICULUM MAP

**Course Name: Principles of Math**
**Course Number: 40410**

**Unit 9:**
**Vehicle Transportation**

**Grade/Level: 11-12/HS**

**Standards:**

CC 2.2 HS C1 Use the concept and notation of functions to interpret and apply them in terms of their context.
CC 2.2 HS C3 Write functions or sequences that model relationships between two quantities.
CC 2.2 HS C5 Construct and compare linear, quadratic and exponential models to solve problems.
CC 2.2 HS C6 Interpret functions in terms of the situation they model.
CC 2.2 HS D2 Write expressions in equivalent forms to solve problems.
CC 2.2 HS D8 Apply inverse operations to solve equations or formulas for a given variable.

**Big Idea(s):**
Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.
Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

**Essential Question(s):**
How is mathematics used to quantify, compare, represent, and model numbers?
How can mathematics support effective communication?
How can expressions, equations and inequalities be used to quantify, solve, model, and/or analyze mathematical situations?
How is mathematics used to quantify, compare, represent, and model numbers?
How are relationships represented mathematically?
How can expressions, equations and inequalities be used to quantify, solve, model, and/or analyze mathematical situations?

| Number of Instructional Days | Concepts | Competencies and Skills | Key Vocabulary | Materials, Resources, Activities, Technology, Literacy Strategies | Eligible Content |
|---|---|---|---|---|---|
| 8 Days | Dealer's Cost<br><br>Lease | Create and/or solve equations (including literal, polynomial, rational, radical, exponential, and logarithmic) both algebraically and graphically.<br><br>Use and/or explain reasoning while solving | Dealer's Cost<br><br>Insurance<br><br>Lease | *Financial Fitness for Life*<br><br>9.1 Purchasing a New Vehicle<br><br>9.2 Dealer's Cost<br><br>9.3 Purchasing a Used Vehicle<br><br>9.4 Vehicle Insurance<br><br>9.5 Operating and Maintaining a Vehicle | A2.1.3.2.1 Determine how a change in one variable relates to a change in a second variable<br><br>A2.1.3.2.2 Use algebraic processes to solve a formula for a given variable |

| | | | | | |
|---|---|---|---|---|---|
| | | equations, and justify the solution method.<br><br>Interpret functions in terms of the situations they model.<br><br>Create and/or analyze functions using multiple representations (graph, table, and equation).<br><br>Create a function and/or sequence that models a relationship between two quantities.<br><br>Create new functions from existing functions (transformations and/or inverses of functions). | | 9.6 Leasing a Vehicle<br><br>9.7 Renting a Vehicle<br><br>Combination of shared activities, quizzes, assessments.<br><br>Combination of IXL, Delta Math | |