

Curriculum Guide

Course: Mathematics III

Course number: 14:01

Written: 3/09

Prerequisites: none

Level/credits: LLD/5 credits

Grades offered to: 11th and 12th

Course Description:

Mathematics III is a required course for the Learning and Language Disabled class. It is designed for secondary special education students who have a basic grasp of mathematical computation but require additional instruction for applying these skills as a wise consumer. Instruction is provided using a variety of realistic, consumer-oriented applications. The goal of Mathematics III is to provide students with the tools they will need to function as independent, employable, contributing citizens.

High Point Regional High School's curriculum and instruction are aligned to the state's Core Curriculum Content Standards and address the elimination of discrimination by narrowing the achievement gap, by providing equity in the educational programs and be providing opportunities for students to interact positively with others regardless of race, creed, color, national origin, ancestry, age marital status, affectional or sexual orientation, gender, religion, disability, or socio-economical status.

Course Goals and Objectives

Goal #1 – To understand and apply the mathematics involved in earning money.

Objective – To compute weekly wages, annual wages, and annual salary.

Objective – To compute wages when overtime is involved.

Objective – To determine wages for jobs that involve piecework or tips.

Objective – To use decimals and percents to compute commissions.

Objective – To determine salary in a pay period by using rounding.

Objective – To use decimals and percents to compute commissions.

Objective – To distinguish between gross pay and net pay.

Goal #2 – To understand and apply the mathematics involved in buying food.

Objective – To read and compare prices in sale advertisements.

Objective – To change prices from cents to dollars and from dollars to cents.

Objective – To compute the cost of a single item and multiple items.

Objective – To compute change.

Objective – To use the information on coupons and determine the cost of an item when a coupon is used.

Objective – To compute and compare unit prices.

Goal #3 – To understand and apply the mathematics involved in managing a household.

Objective – To state and apply the renter’s rule and the banker’s rule to plan monthly rent or mortgage payments.

Objective – To compute the cost of rent for one year.

Objective – To solve problems related to down payments, monthly payments, and total amounts paid for mortgages

Objective – To solve word problems related to utility expenses.

Objective – To compute expenses related to mortgage insurance and homeowners insurance.

Goal #4 – To understand and apply the mathematics involved in buying and maintaining a car.

Objective – To compute the price of a car when financing arrangements are made.

Objective – To determine the cost of an automobile when trade-ins or rebates are involved.

Objective – To compute insurance premiums.

Objective – To solve problems related to average speed and driving time.

Objective – To compute fuel costs and the costs associated with car repairs.

Goal #5 – To understand and apply the mathematics involved in working with food.

Objective – To calculate the number of calories consumed.

Objective – To use ratios and proportion to calculate fat calories and change recipe yields.

Objective – To read and interpret nutrition information found on food packages.

Objective – To find the number of calories your body uses when exercising.

Objective – To calculate the times food should begin cooking to be ready at a given time.

CCCS Addressed

1. 4.1 Number and Numerical Operations – All students will develop number sense and will perform standard numerical operations and estimations on all types of numbers in a variety of ways.
2. 4.2 Geometry and Measurement – All students will develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena.
3. 4.5 Mathematical Processes – All students will use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas.

Units: Marking Period 1

Chapter One: Wages, annual wages, time worked, overtime, regular wages plus overtime, tips, piecework, rounding money, salary, commission, salary plus commission, and net pay

Units: Marking Period 2

Chapter Two: Expressing prices, reading prices, adding prices, computing change, coupons, coupons for more than one, coupons with conditions, expiration dates, finding the cost of one, using the word “per”, unit price, and comparing unit prices

Chapter Three: Sale prices, percent saved, discounts, buying from a catalog, simplifying fractions, common denominators, and using a charge account

Midterm

Units: Marking Period 3

Chapter Four: Renting a home, buying a home, computing the down payment, paying the mortgage, terms of mortgages differ, reading utility meters, utility consumption, telephone bills, gas bills, electric bills, mortgage insurance, and homeowners insurance

Units: Marking Period 4

Chapter Five: Buying a new car, buying a used car, financing a car, automobile insurance, reading an odometer, average miles driven per year, number of miles traveled, computing gas mileage, computing the range of a car, computing the fuel needed, computing average speed, computing travel time, buying gasoline, and computing the cost of repairs

Chapter Six: Counting calories, ratios, proportions, using nutrition information, fat grams and calories, using calories, losing pounds, changing recipe yields, and timing food preparation

Final Exam

Evaluation

Homework based on	10 points
Participation and class work	10 points
Quizzes	50 points
Tests	100 points
Notebook check	10 points

Midterm (written 2009)

Final (written 2009)

Reference: Textbook: Consumer Mathematics, Kathleen M. Harmeyer, American Guidance Service, Inc., 2001. Blackline master worksheets, SmartBoard, scientific calculator, computer, Internet access