

## Curriculum Guide

Course: Mathematics 2

Course number: 14.02

Written: 1/09 (D. Wilson)

Prerequisites: none

Level/credits: LLD/5 credits

Grades offered to: 9<sup>th</sup> and 10<sup>th</sup>

### Course Description:

Mathematics II has been designed as a required course for the Learning and Language Disabled class. The course is designed to enable every student to develop sufficient skills in fractions, decimals, ration and proportion, percent, introduction to geometry, and measurement..

High Point Regional High School's curriculum and instruction are aligned to the state's Core Curriculum 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.

### Goals and Objectives:

Goal: To compare, simplify and compute fractions.

#### Objectives:

- To name and compare fractions
- To express a fraction in higher terms
- To rename mixed numbers as improper fractions
- To rename improper fractions as whole numbers or mixed numbers
- To solve word problems involving mixed numbers
- To add, subtract, multiply and divide fractions

Goal: To write, compute and express numbers as decimals

#### Objectives:

- To identify the value of a digit in a specific place
- To read decimal numbers written as numerals
- To compare and order decimal numbers
- To add, subtract, multiply, and divide decimal numbers
- To write factors expressed as decimal numbers
- To write whole numbers and decimal numbers in scientific notation
- To rename decimals as fractions

Goal: To find, convert, and calculate units of measure

#### Objectives:

To convert units of liquid measurements  
To convert units of weight  
To measure using customary units of length  
To convert units of linear measurement  
To add, subtract, multiply, and divide unit of linear measure  
To find the perimeter of regular and irregular polygons  
To solve word problems involving area and perimeter  
To find the area of a rectangle, triangle, and parallelogram  
To determine the volume of a triangular prism and rectangular prism

Goal: To find, convert and calculate other units of measure

Objectives:

To find the circumference of a circle  
To determine the diameter of a circle  
To calculate the area of a circle  
To compute the volume of a cylinder  
To add and subtract units of time  
To determine the elapsed time from one given time to another given time

Goal: To identify and compare ratio and proportion

Objectives:

To write a ratio as a fractions in simplest form  
To compare amounts, using a ratio  
To identify ratios that forms a proportion  
To find the missing term in a proportion  
To solve word problems, using ratios and proportions

CCCS Addressed:

- Standard 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.
- Standard 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.
- Standard 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 1 – Whole Numbers

Identify the place value of a digit in a number

Write numbers in word form  
Round numbers  
Compute with whole numbers to solve word problems

Chapter 3 – Fractions

Compare fractions and determine which is more than or less than  
Simplify fractions  
Rename mixed numbers and improper fractions  
Compute with fractions and mixed numbers

Chapter 4 – Decimals

Write numbers in word form and in standard notation  
Order numbers  
Round numbers  
Compute with decimals and whole numbers  
Express fractions as decimals  
Express numbers in scientific notation

Units: Marking Period 2

Chapter 5 – Ratio and Proportion

Write a ratio as a fraction in simplest form  
Compare amounts, using a ratio  
Identify ratios that form a proportion  
Find the missing term in a proportion  
Solve word problems, using ratios and proportions

Chapter 6 – Percent

Rename a percent as a decimal and a fraction in simplest form  
Rename a decimal and a fraction as a percent  
Find the missing terms in a percent sentence  
Use a proportion to find the missing term in a percent sentence  
Solve word problems involving percents and tax, commission, interest, and tips  
Calculate monthly payments on an installment plan

**Midterm**

Units: Marking Period 3

Chapter 9 - Customary Measurement

Convert units of liquid capacity  
Convert units of weight  
Use a ruler to help you measure line segments  
Convert units of length and distance  
Find the perimeter of a given shape

Calculate the area within a shape  
Compute the volume within a prism

Units: Marking Period 4

Chapter 10 – Other Units of Measure

Find the circumference of a circle  
Determine the diameter of a circle  
Calculate the area of a circle  
Compute the volume of a cylinder  
Add and subtract units of time  
Determine the elapsed time from one given time to another given time

### **Final Exam**

Additional Materials – charts, rulers, capacity containers, practice sheets

Evaluation:

Homework based on	10 points
Class work based on	10 points
Quizzes based on	50 points
Tests based on	100 points

Midterm (written 2008)

Final (written 2009)

Reference: Basic Math Skills, American Guidance Service, 2001, student worksheets  
Calculator – Casio *fx* 65