

MATHEMATICS

New York State Learning Standards

Students will be tested on the following standards:

- Mathematical Reasoning – Students use mathematical reasoning to analyze mathematical situations.
- Number and Numeration- Students use number sense and numeration to develop an understanding of the multiple uses of number in the real world, use the numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.
- Operations – Students use mathematical operations and relationships to understand mathematics.
- Measurement – Students use measurement in both metric and English measure to provide a major link between abstractions of mathematics and the real world in order to describe and compare objects and data.
- Uncertainty – Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.
- Patterns/Functions – Students use patterns and functions to develop mathematical power, and construct generalizations that describe patterns simply and efficiently.

September – November 2016

Unit I: Understanding Whole Numbers and Operations

Objective: Students will understand how to find the value of a digit, develop accuracy in reading, writing, and identifying place value of numbers through millions, understand how to use a benchmark to find greater amounts, understand how to apply the skill and use a graph.

Theme: Place Value and Number Sense Ch. 1 pp. 1 – 16

- Compare and Order Whole Numbers Ch. 1 pp. 18 – 37
- Add and Subtract Greater Numbers Ch. 3 pp. 38- 61
- Algebra: Use Addition and Subtraction Ch. 4 pp. 62 – 85

Textbook: Harcourt Math. Volume 1

Other Resource Material: GO Math; Common Core Coach

Unit II: Time, Data and Graphing

Objectives: For students to learn to read and write time to the nearest minute and second.

Develop skill and accuracy in elapsed time using calendars, clocks, and schedules.

Solve problems by using skill sequence information.

Use information on graphs to solve problems.

Theme: Understand Time Ch. 4 pp. 94 – 100

- Collect and Organize Data Ch. 6 pp. 112 – 132
- Analyze Graph and Data Ch, 7 pp. 134 – 152

Textbook: Harcourt Math. Vol. 1

Other Resource: GO Math & NY State Practice Coach Books.

November 2016 – January 2017

Unit III: Multiplication and Division Facts

Objectives: Students will understand the relationship between multiplication and division, understand and utilize the strategies used to find products and quotients mentally, develop skill and accuracy in multiplying and dividing with numbers through 12, identify and use multiplication properties, understand the process in deciding what operation to use to solve a problem.

Theme: Practice Multiplication and Division Facts Ch. 8 pp. 162 – 180

Use Multiplication and Addition Facts Ch. 9 pp. 182 -202

Textbook: Harcourt Math., Vol. 1

Other Resource: GO Math., NY State Coach Text & Workbook

Unit IV: Multiply and by 1- and 2- Digit Numbers

Objectives: Students will use basic facts and patterns to find products mentally, estimate products by using rounding and compatible numbers; write the product of a multi- digit factor multiplied by a one – digit factor using various methods.

Theme: Multiply by 1- Digit Numbers Ch. 10 pp. 212 – 232

Multiply by Tens Ch. 11 pp. 234 – 248

Multiply by 2 – digit Numbers Ch. 12 pp. 250 – 266

Textbook: GO Math; Harcourt Math. Vol. 2
Other Resource: New York Coach Test Booklets

Unit V: Divide by 1- and 2-Digit Divisors

Objective: Students will use division patterns to solve division problems.

Theme: Understand Division Ch. 13 pp. 276 – 294
Divide by 1-digit divisors Ch. 14 pp. 295 – 314
Divide by 2-digit divisors Ch. 15 pp. 315 – 333
Number Theory Ch.16 pp. 334 – 353

Textbook: Harcourt Math. Vol. 2

January – April 2017

Unit VI: Geometry

Objective: Students will identify and differentiate between Lines, Rays, Angles and Plain Figures; Explore Negative Numbers and Graphing.

Theme: Lines, Rays, and Angles Ch.17 Pp. 362 – 376
Plane Figures Ch. 18 pp. 378 – 394
Motion Geometry Ch. 19 pp. 396 – 416
Algebra: Explore Negative numbers and Graphing Ch. 20 pp. 418 – 435

Textbook: Harcourt Math. Vol. 2& GO Math
Other Resource: NY. State Test Booklets

Unit VII: Fraction and Probability

Objectives: Students will add and subtract fractions and mixed numbers; Identify fractional numbers and estimate probability outcome.

Themes: Understanding Fraction Ch.21 Pp. 444 – 464
Add and Subtract Fractions and Mixed Numbers Ch.22 pp.465 – 486
Probability and Outcomes Ch. 23 Pp.488 – 506

Textbook: Harcourt Math. Vol. 3

Other Resource: GO Math., & NY State Text& Workbook

April – June 2017

Unit VIII: Measurement and Decimals

Objectives: Students will estimate and measure length using nonstandard and customary units; estimate and measure capacity and weight using customary units; use multiplication and division to convert units within the customary system of measurements; identify decimal numbers and equivalent fractions.

Themes: Customary Measurement Ch. 24 pp. 516 – 536

Metric Measurement Ch. 25 pp. 538 – 580

Understand Decimals Ch. 26 pp. 558 - 580

Add Subtract decimals Ch. 26 pp. 582 - 600

Textbook: Harcourt Math. Vol. 3

Other Resources: GO Math. & NY State Practice Books.

Unit: Perimeter, Area, and Volume

Objectives Students will estimate and measure perimeter of polygons using nonstandard and standard units; use formulas to find the perimeter of polygons; estimate the circumference of circles.

Themes: Perimeter of Prime Figures Ch. 28 pp. 610 – 624

Area of plane Figures Ch. 29 pp. 626 – 640

Solid Figures and Volume Ch. 30 pp. 642 – 658

Textbook: Harcourt Math. Vol. 3

Other Resource: GO Math. & NY State Practice Books.