



Advanced Math 3-4 Syllabus

Course Goals

1 Develop New Skills

Students develop their mathematical knowledge and abilities as they learn and practice new skills from their upcoming school year math course.

2 Review Prior Skills

Students review and practice topics from their previous school year math course, and use them as a foundation for the new skills that they will acquire.

3 Build Confidence

Students gain confidence in their mathematical abilities through practice and supportive feedback.

4 Make Connections

Students make connections between different mathematical topics, and between math and everyday situations that connect to the math they learn.

Course Topics

1 Fractions

Students learn to add, subtract, multiply and divide fractions. Students also spend time working with mixed numbers and reducing and simplifying fractions using techniques such as factoring.

2 Decimals

Students become more comfortable manipulating decimals. This includes learning to round to different numbers of decimal places, multiplication, division, addition, and subtraction of decimals. Students also learn to convert fractions to decimals and vice versa.

3 Integers and Arithmetic

Students solidify their understanding of addition, subtraction, division and multiplication of integers. This topic also includes estimation and manipulating expressions using correct orders of operation rules.

4 Geometry, Perimeter, and Area

Students are introduced to many geometry concepts. Topics include classification of angles, finding area, perimeter, and volume of shapes. Students also learn about transformations and tessellations.

5 Statistics

Students work with small data sets to learn about basic statistical concepts such as mean, median, and mode.

6 Ratios and Proportions

Students learn different ways of representing proportional relationships and use proportions and ratios to solve real-world problems.

7 Pre-Algebra

Students begin to be introduced to variables and their use in equations. Students also work on graphical representations using coordinate planes to graph points and lines.

8 Logic and Patterns

Students work on challenging logic problems both visually and through word problems. They also learn ways to recognize patterns from sets of numbers.

Course Schedule

Day 1

Introduction and Icebreaker

Students are introduced to the course and review the rules. Students also briefly get to know each other and the instructor.

Diagnostic Test

Students take the diagnostic assessment.

Daily Instruction & Practice

Students practice the class topics at their own pace.

Day 2

Daily Warm-Up

Students are introduced to a topic at the beginning of a lesson, or review a previous topic before beginning a new lesson.

Daily Instruction & Practice

Students practice the class topics at their own pace.

Daily Enrichment

Students engage in an activity to enrich their learning of each topic.

Day 3

Daily Warm-Up

Students are introduced to a topic at the beginning of a lesson, or review a previous topic before beginning a new lesson.

Daily Instruction & Practice

Students practice the class topics at their own pace.

Daily Enrichment

Students engage in an activity to enrich their learning of each topic.

Day 4

Daily Warm-Up

Students are introduced to a topic at the beginning of a lesson, or review a previous topic before beginning a new lesson.

Daily Instruction & Practice

Students practice the class topics at their own pace.

Daily Enrichment

Students engage in an activity to enrich their learning of each topic.

Day 5

Daily Warm-Up

Students are introduced to a topic at the beginning of a lesson, or review a previous topic before beginning a new lesson.

Daily Instruction & Practice

Students practice the class topics at their own pace.

Daily Enrichment

Students engage in an activity to enrich their learning of each topic.

Day 6

Daily Warm-Up

Students are introduced to a topic at the beginning of a lesson, or review a previous topic before beginning a new lesson.

Daily Instruction & Practice

Students practice the class topics at their own pace.

Daily Enrichment

Students engage in an activity to enrich their learning of each topic.

Day 7

Daily Warm-Up

Students are introduced to a topic at the beginning of a lesson, or review a previous topic before beginning a new lesson.

Daily Instruction & Practice

Students practice the class topics at their own pace.

Daily Enrichment

Students engage in an activity to enrich their learning of each topic.

Day 8

Daily Warm-Up

Students are introduced to a topic at the beginning of a lesson, or review a previous topic before beginning a new lesson.

Daily Instruction & Practice

Students practice the class topics at their own pace.

Daily Enrichment

Students engage in an activity to enrich their learning of each topic.

Day 9

Daily Warm-Up

Students are introduced to a topic at the beginning of a lesson, or review a previous topic before beginning a new lesson.

Daily Instruction & Practice

Students practice the class topics at their own pace.

Daily Enrichment

Students engage in an activity to enrich their learning of each topic.

Study for Final Test

Students study for the final assessment.

Day 10**Final Test**

Students take the post-assessment.

©2022 Fairfax Collegiate School, LLC. All rights reserved.

Updated on 7/9/2022