SECONDARY COURSE DESCRIPTION

SECTION A: COURSE CLASSIFICATION

ALAMEDA UNIFIED SCHOOL DISTRICT
Excellence & Equity For All Students

1. Course Title: Accelerated 7 Math	6. Prerequisite(s): 6th Grade Math Course 1 or equivalent
2. Action: _x__ New Course ___ Course Revision ___ Title Change Only	7. Grade Level: 6th-8th Grade
3. Transcript Title/Abbreviation: **Accel Math 7** (For Educational Services)	8. Elective/Required: Required
4. Transcript Course Code/Course Number: **MPIH** (For Educational Services)	9. Subject Area: Math
5. CBEDS Code: (For Educational Services) **9240**	10. Department: Math

11. Length /Credits:
___ 0.5 (half year or semester equivalent) _X__ 1.0 (one year equivalent)
___ 2.0 (two year equivalent)

12. Was this course previously approved by UC? ___ Yes _X__ No
NA for middle school course
If so, year removed from list: _____

13. Meets the "_N/A_" requirements in the a-g university/college entrance requirement. Approval date: _____-

14. School Contact Information
Name: __Terri Elkin __ Title/Position: _Secondary Coordinator_____
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16. Signatures:
Department Chair: _____
Principal: _____
Acknowledged by Other Principals: _____
_____
_____
_____
Educational Services: _____

16. BOE Approval
Signature of Superintendent:_____ Date of Approval_____

SECTION B. COURSE CONTENT

17. **Course Description**:

Accelerated Grade 7 Math is for students who demonstrated in the 6th grade, through multiple measures as captured on the AUSD placement matrix, a capacity for accelerated work in math. These students are on a track to take Algebra 1 in the 8th grade. The course covers 7th and 8th grade standards in the strands for ratios and proportional relationships, the number system, Expressions and Equations, Geometry, and statistics and probability, as well as further development of the 8 mathematical practices.

18. **Course Goals and/or Major Student Outcomes**:

Major student outcomes are focused in 5 critical areas:

(1) developing understanding of and applying proportional relationships (7th grade), extended with concept of modeling relationships with linear equations (8th), understand the connection between proportional relationships, lines, and linear equations (8th)

(2) developing a unified understanding of number and properties of operations, extend operations to rational numbers and algebraic expressions (7th), introduce concept of irrational number and approximation (8th)

(3) working with expressions and linear equations to model and solve real-life and mathematical problems (7th), choose and efficiently implement procedures to solve linear equations in one variable, understanding properties of equality and logical equivalence (8th), embed in problem solving, informal analysis and graphing of linear equations in two variables and make meaning of slope and intercepts in context of problems, translate between various representations of linear relationships(8th)

(4) developing understanding of statistics and probability with a focus on using random sampling to draw inferences, comparing two distributions, and probability (7th), and investigating patterns of association in bivariate data, through scatter plots, linear modeling and two-way tables (8th)

(5) working with two- and three-dimensional space and figures using distance, angle, transformations, congruence and similarity, to solve problems involving area, surface area, and volume, solving problems involving scale drawings (proportional relationships), producing informal geometric constructions,and understanding and applying the Pythagorean Theorem (7th and 8th)

8th grade standards deferred to 8th grade Algebra

- Systems of equations
- Radicals and integer exponents
- Formal functions (should embed concept in problem solving but leave formal introduction to Algebra 1)

19. Course Objectives (standards):

Ratios and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems (7th)

The Number System

- Apply and extend previous understandings of operations with fractions to add, subtracts, multiply, and divide rational numbers (7th)
- Know that there are numbers that are not rational, and approximate them by rational numbers (8th)

Expressions and Equations

- Use properties of operations to generate equivalent expressions (7th)

- Understand the connection between proportional relationships, lines, and linear equations (8th)
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations (7th) to model relationships between quantities (8th)

Geometry

- Draw, construct and describe geometric figures and describe the relationships between them (7th)
- Solve real-life and mathematical problems involving angle measure, area, surface area, and volume of cubes, right prisms, cylinders, cones, and spheres. (7th)
- Understand congruence and similarity through transformations using physical models, transparencies, or geometry software (8th)
- Understand and apply the Pythagorean Theorem and connect to the coordinate plane (8th)

Statistics and Probability

- Use random sampling to draw inferences about a population (7th)
- Draw informal comparative inferences about two populations (7th)
- Investigate change processes and develop, use, and evaluate probability models (7th)
- Investigate patterns of association in bivariate data (8th)

20. Course Outline:

The course will follow the Accelerated Grade 7 Curriculum Guide being developed summer 2019, appended by reference

21. Instructional Materials:
Board approved required text:

Big Ideas Math: Modeling Real Life Grade 7 Accelerated

Supplementary materials:
Desmos, MARS lessons and illuminate tasks are hyperlinked in the Curriculum guide

22. Instructional Methods and/or Strategies

Accelerated Grade 7 Math is a fast-paced and demanding course which strives to cover significant content, develop deeper mathematical understanding, and build our students capacity for rigorous mathematical thinking. Instructional methods are built on common core best practices with a focus on student involvement in tasks that ask them to "do" math, participate in and contribute to meaning-making and reasoning.

23. Assessment and Evaluation

Students will be assessed with classroom quizzes and tests. Rich math tasks and district benchmarks.

24. Grading Policy

Math should be graded based on mastery of standards. In traditional grading, students are measured by the percentage of work successfully completed with the assumption that a higher completion rate reflects greater mastery. However, this does not reflect students growth as students and in understanding over time. While we work within a traditional grading system, teachers are encouraged to incorporate precepts of a mastery based mindset into their grading policy.

Examples of ways to incorporate grading for mastery include:

- spiraling assessment
- providing a variety of methods to demonstrate understanding
- allowing students to choose between methods of demonstrating understanding
- having a later assessment, when student demonstrates understanding of more complex concepts to count more than an earlier grade
- weighing performance in the second quarter of a semester more than the work in the first quarter
- offering retakes of assessments, after a student has demonstrated work to address misunderstandings
- providing feedback on homework, classwork and participation and having these categories make a positive contribution to a student's overall grade (can do this by avoiding zeros, accumulating positive points for work completed)

SECTION C. OPTIONAL INFORMATION

25. Context for offering the course:

This is a new class for AUSD. It was developed to eliminate the previous practice of having students skip 7th and 8th grade math courses to begin Algebra 1 in the 7th grade and to lessen the tracking of students at that point. Research has shown that more students are successful when these important foundation standards are solidly in place before students begin Algebra. This course is intended for 7th graders.