Legacy High School
2701 West 136th Ave • Broomfield, CO 80023
Office: (720) 972-6700 • Fax: (720) 972-6899
http://www.legacy.adams12.org

Adams12 Five Star Schools

Year	2022-2023	**Teacher**	Don Dennert II
Office	A118	**Classroom**	D213
Email	Den022668@adams12.org		

Course Name	Math 2
Course Description	Math 2 expands into quadratic, and other functions. Students will also explore polynomial equations and factoring, and probability and its applications. Coverage of geometry topics extends to right triangle trigonometry, polygon relationships, proofs, similarity, and circles.

Quarter 1 - Essential Outcomes and Gradebook Categories	Percentage of the Final Grade
Coursework and Homework	20%
Assessment	70%
Cumulative Multiple Choice Final	10%

Quarter 2 - Essential Outcomes and Gradebook Categories	Percentage of the Final Grade
Coursework and Homework	20%
Assessment	70%
Cumulative Multiple Choice Final	10%

Materials: Bring the following supplies <u>every day</u>!

- **Chromebook**: Please bring your Adams 12 issued Chromebook or you personal computer. Note: On test day, tests must be taken on Adams 12 issued Chromebooks.
- **Binder**: all materials must be well organized. Your binder should contain the following tabbed sections: warm-ups, daily work, assessments, blank notebook paper, blank graph paper
- **Pencil case** (preferably clipped in the binder) with p**encils, eraser, colored pencils, colored pens, a clear 6" ruler** (with centimeter marks), and **protractor**
- **TOOLKIT**: Method of your choice. 3-Ring Binder, Folder, Composition notebook, etc.
- **Calculator**: **Recommend TI-83 or Higher.**

Grading Scale	
A	90-100
B	80-89
C	70-79
D	60-69
F	*59 or below*

General Expectations

- Grades are based upon the demonstration of proficiency on units associated with an essential outcome given during each assessment.
- Assessments will be graded based on teacher/district/state rubrics.
- On group projects, students will receive a grade for individual work. A group grade may also be given.
- Grades are based on achievement of Colorado Academic Standards and grade level expectations.

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Assessment Policy

Essential Outcome Assessments measure achievement when mastery is expected.

1. The purpose of assessments is to assess *student learning* through constructive response and/or multiple choice questions, and as a result, they account for the majority of the student's grade in the course.
2. Students have multiple opportunities to show their understanding of each essential outcome as reflected by their score on the assessments.
   - **A.** The **first opportunity (test)** is each student's initial chance to demonstrate their understanding of the essential outcome.
   - **B.** The **second opportunity (retake)** is each student's second chance to demonstrate their understanding of the essential outcome.
     - Below are the requirements to be eligible for the retake the constructed response problems:
       - **Prior to taking the test: In order to be eligible to retake a second opportunity**, students must complete, on time, a unit review, submitting their answers in-class or online by the deadline as set by their teacher prior to the first test. Students will be given class time prior to the set due date to work on the review. The teacher will enter the score for the review into the gradebook, however, this score will not affect the student's grade but to give an indication of a student's preparedness for the assessment. A score of *missing* indicates the review was either incomplete or late which means the student will not be eligible for the retake.
       - The expectation is that the student takes personal responsibility to improve their understanding of the essential outcome. If the students complete test corrections on time they will be given additional practice to ensure they are ready for the retake. Answers to these problems will be posted so that students can check their work.
       - The second opportunity assessment will be given during a ASP on Wednesday mornings.
       - If a student earns a lower score on the retake, the original test score stays. The higher of the two scores will stand.
     - For the MC problems:
       - The final exam will consist of a balanced number of questions from each essential outcome. The overall grade on the final exam will be included as a test score in its own category.
       - If the section score for the lowest scoring essential outcomes is higher than the multiple choice score from the unit test, the section score will replace the original level multiple choice test score.
3. There will be a cumulative multiple choice final exam at the end of each grading period. (see bullet above)
4. Use of electronics is strictly prohibited and will be viewed as academic dishonesty. Phones, iPods, headphones, etc. must be turned off and stored off the student's body.

Essential Outcome Assessment Grading Policy (70% of grade)

1. *Leveled* assessments are used. This means that questions on the test are categorized by their level based on the district math rubric shown:

Level 4	Level 3	Level 2
• The student uses ***appropriate*** mathematical concepts and skills to solve application problems in both familiar ***and unfamiliar situations*** *with* ***limited*** *scaffolds & supports.* ***and/or*** • The student solves problems that *require connections among multiple concepts* ***without scaffolded prompts****.*	• The student uses ***appropriate*** mathematical concepts and skills to solve application problems in ***familiar situations*** *with scaffolds & support.* ***and/or*** • The student solves problems that require *connections among multiple concepts* ***with scaffolded prompts.***	• The student uses ***appropriate*** mathematical concepts and skills to solve ***routine problems*** but is unsuccessful *with applications to real life contexts.* ***and/or*** • The student solves problems *involving* ***concepts in isolation.***

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Legacy High School Math Department Grading Rubric for Individual Test Questions

Answer – Work – Understanding – Directions – Remediation		
Yes!	**4**	**Fully accomplishes the purpose of the task** • Correct answer • Clear, organized explanation and process • Shows full grasp and use of the central mathematical ideas • Directions are followed
Procedural Error Issue with Prior Math	**3**	**Substantially accomplishes the purpose of the task** • Correct answer – **or** – Answer has *minor* errors that do not demonstrate significant lack of understanding of the mathematics • Fairly clear and organized explanation and process • Shows essential grasp and use of the central mathematical ideas • Directions are mostly followed • Mistakes could be corrected with a simple hint or quick reminder
Conceptual Error Issue with Current Math	**2**	**Partially accomplishes the purpose of the task** • Answer has *moderate-to-significant* errors that demonstrate lack of understanding of the mathematics being assessed • Explanation and process are lacking in clarity and organization • Shows partial grasp and use of the central mathematical ideas • Directions are not followed completely • Mistakes would require a one-on-one discussion with the teacher to fix.
Extensive Errors Valid Attempt	**1**	**Very little progress towards accomplishing the purpose of the task** • Incorrect answer • Explanation and process are severely lacking in clarity and organization • Shows little to no grasp of the central mathematical ideas • Directions are not followed • Material needs to be re-taught
Extensive Errors Non-Valid Attempt	**0**	**No progress towards accomplishing the purpose of the task** • Incorrect answer • Work is missing or completely off base • Shows no grasp of the central mathematical ideas • Directions are not followed • Material needs to be re-taught from scratch

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Coursework and Homework (20% of grade)	Coursework includes in-class and out-of-class assignments over smaller chunks of material. The purpose of coursework is to practice skills and provide feedback on the progress a student is making towards understanding the concepts coming up on assessments. Superintendent Policy 6280 Homework will be followed: 4.0 Student Responsibilities: 4.1 Ask for clarification if an assignment or its due date is not understood. 4.2 Complete homework assignments thoroughly, thoughtfully and neatly. 4.3 Submit homework assignments on time.
Multiple Choice Final (10% of grade)	At the end of the semester, there will be a multiple choice final exam covering all essential outcomes for the grading period. This score for this exam will be calculated as a percentage of questions answered correctly.
Assignments	You will be informed as to the due dates for all assignments. Students are expected to provide their best, genuine attempts on all assignments. Students are expected to monitor their progress on essential outcomes and advocate for their learning by seeking help as needed.
Make-Up Work	Superintendent Policy 6281 Make-Up Work will be followed.
Toolkit	The Toolkit is used to record vocabulary, major themes, big ideas, and important formulas for all Legacy math classes. Toolkits are updated in class.
Graphing Calculator	Access to a graphing calculator is required for this course. The TI-84 series is the superior choice for your work at Legacy, and throughout college mathematics. A TI-83 will work as well, but has a slightly different interface. Please avoid other TI models or other brands. Please contact your teacher if financial hardship prevents you from acquiring this supply.
Absence Policy	You are expected to make up any work missed because of any absence. You are responsible to request the make-up assignment(s). You will have the number of days absent plus one additional day to make up missed work for an absence. However, long-term assignments (one week or more from the assignment date to the due date) are due on the stated due date, regardless of the absence and are not accorded extra days upon return to school. Students absent on the day of a summative assessment will take the assessment on their first day back in class. Long-term illnesses will be dealt with on an individual basis.
Tardy Policy	Our tardy policy relies on teacher communication, intervention, and consequences. Students are expected to be on time to all classes every day. Beginning each semester, if tardy: 1st-3rd: verbal warning by teacher and parent contact on 3rd. 5th: teacher will speak with parent/guardian. 7th: 30 minute after school detention served with the teacher in the classroom. Teacher will speak to parent/guardian again. After the 8th tardy, teacher discretion may be used for consequences. Once a student has served three 30 minute detentions with a teacher, a student may be referred to the Deans Office for defiance of authority.
Student Integrity Oath	I agree to conduct myself with integrity in all regards. I commit to presenting my own work, writing, words, and ideas at all times, unless otherwise attributed. In addition, I will not copy, use communication devices during tests, post assessments for public access, falsely identify myself, or use inappropriate materials. Engaging in any of these activities represents a breach of this oath and subjects me to the disciplinary code of Legacy High School and the Adams 12 Five Star School District. It is my honest intention to uphold this oath.
Plagiarism/ Cheating Policy	Plagiarism means to present, as one's own, the work, writing, words, ideas, or computer information of someone else. Sources could be published or unpublished. If unclear, always ask the teacher. Cheating is supplying, requesting, or using unauthorized information prior to or during an assignment or assessment. (Examples: looking at or using someone else's work, using crib/stolen/borrowed notes, or unauthorized use of electronics). Consequences for plagiarism and cheating apply to all classes and discipline carries over year to year. Matrix for Plagiarism/Cheating: 1st – 0 on the assignment, teacher calls home and referral 2nd – 0 on the assignment, one-day suspension, parent/teacher conference, referral 3rd – 0 on the assignment, two-day suspension, referral 4th – 0 on the assignment, referral to District Hearing

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Unit of Study	Grade Level Expectations/Content Standards	Approximate Time Spent (Approx Test Date)
Chapter 2: Polynomial Equations & Factoring *Students will perform arithmetic operations with polynomials to begin their introduction to quadratics. They will begin making connections between factoring and the graphs of polynomials.*	• Classify, add, and subtract polynomials. • Multiply two binomials using the FOIL method, the square of a binomial pattern, and the sum and difference pattern. • Multiply binomials and trinomials. • Solve polynomial equations using the Zero-Product Property and by factoring out the greatest common factor (GCF). • Factor $x^2 + bx + c, ax^2 + bx + c$, and perfect square trinomials. • Factor polynomials as the difference of two squares and by grouping. • Use factoring to solve real-life problems involving polynomial equations.	**9 days** (8/30)
Chapters 3 and 4: Graphing and Solving Quadratics *Students will immerse themselves into quadratic functions. They will explore quadratics written in different forms and how that affects the way they will graph or solve the functions.*	• Graph, write, and use quadratic functions in standard form, vertex form, and intercept form. • Find minimum and maximum values of quadratic functions. • Identify even and odd functions algebraically and graphically. • Use the intercept form of quadratic functions to find the zeros of the functions. • Write equations of parabolas with a vertical axis of symmetry or with a horizontal axis of symmetry. • Write quadratic functions to model data and write a recursive rule for a quadratic function. • Compare linear, exponential or quadratic functions using average rates of change.	**23 days** (Ch. 3 on 9/13) (Ch. 4 on 9/29)
Chapter 6: Relationships with Triangles Students will examine relationships within triangles. They will be able to prove these relationships in multiple proof formats.	• Write proofs to prove geometric relationships. • Use perpendicular bisectors and angle bisectors to find measures. • Use and find the circumcenters, incenters, centroids, and orthocenters of triangles. • Use the Triangle Midsegment Theorem to find distances. • Prove geometric relationships using indirect proofs. • Relate sides and angles of a triangle and use the Triangle Inequality Theorem to find possible side lengths. • Use the Hinge Theorem to compare angle measures and side lengths between two triangles.	**7 days** (10/10)
Final day of grading period	•	

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Unit of Study	Grade Level Expectations/Content Standards	Approximate Time Spent
Chapter 7: Quadrilaterals and Other Polygons *Students will broaden their knowledge of quadrilaterals to include the properties of special quadrilaterals. They will use coordinate geometry to prove these properties and give specific names to quadrilaterals.*	• Find and use the interior and exterior angle measures of polygons. • Use properties of parallelograms, rhombuses, rectangles, squares, trapezoids, and kites. • Prove that quadrilaterals with certain properties are parallelograms. • Use coordinate geometry to identify special types of parallelograms. • Identify quadrilaterals using the most specific name based on the given information.	**5 days** (10/21)
Chapter 8: Similarity *Students will explore how proportionality connects to similarity of triangles and other polygons.*	• Identify and perform dilations. • Describe and perform similarity transformations. • Find perimeters and areas of similar polygons using proportions. • Use the AA, SSS, and SAS Similarity Theorems to prove two triangles are similar. • Use proportionality theorems to find lengths of segments.	**7 days** (11/01)
Chapter 9: Right Triangles and Trigonometry *Students will connect Pythagorean Theorem to special right triangles. They will also begin to learn about trigonometric ratios through similarities in right triangles.*	• Use the Pythagorean Theorem and its converse. • Find the side lengths in special right triangles. • Use geometric means to write proportions of similar right triangles. • Use tangent, sine and cosine ratios to find a leg or hypotenuse of a right triangle. • Find the sine and cosine of angle measures in special right triangles. • Use inverse trigonometric ratios to find angle measures of right triangles.	**10 days** (11/15)
Chapter 10: Circles *Students will explore the relationships of angles formed by lines and segments inside and outside of a circle. In addition they will work with circles in coordinate planes.*	• Use Trigonometric Vocabulary to assess parts of a circle • Find the unknowns (lengths and angles) within a given circle • Convert Radians to Degrees and Degrees to Radians. • Use chord, angle, and segment theorems properly in proofs.	**8 days** (12/02)
Chapter 5: Probability *Students will build on their knowledge of probability and two-way tables.*	• Find theoretical and experimental probabilities. • Find and compare probabilities of independent and independent events. • Find conditional probabilities when events are dependent. • Find relative and conditional relative frequencies. • Find probabilities of compound events. • Use the formulas for the number of permutations and number of combinations. • Construct and interpret probability distributions and binomial distributions.	**5 Days** (12/09)
Final day of grading period	•	

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Teacher Expectations
Course Instruction • The expectation is that all students are working collaboratively within their groups. Students are expected to communicate their thinking, results, and generalizations *through* ***both*** written work and discussion. Although instruction is based on collaborative activities***, students are responsible for their own behavior and written products***. • Homework each night will consist of several problems practicing content covered in class. Students need to submit their answers to these assigned book problems online through their textbook login. Additionally, students may have to view several short videos that preview the next class's content. Toolkit notes should be taken on these videos. • Students who are absent should check my math 2 class website for the lesson plan and homework. • When in doubt, check the class website. Check the website. Check the website! Classroom Rules *Misbehavior can interfere with success in the classroom!* 1. Be on time and ready to work 2. Avoid distractions! This includes headphones and cell phones! Cell phone should be silent and out of sight. 3. Stay positive. Remember, I am here to help you be a successful student!
Computers • Students need daily access to the internet to check the class website for current assignments and information and to watch potentially helpful videos. • There are some assignments that can only be completed online. **Students are responsible for managing their computer and printer access either at school or at home.** The Legacy Library has computers and printers available to all students. • There is no excuse for students not completing computer assignments.
Teacher reserves the right to make special arrangements with individual students as necessitated by circumstances.