Our Lady of Guadalupe Catholic School

Our mission is to foster gospel values, inspire academic excellence, and develop service and leadership. We face this task as a sacramental community united and empowered by the Holy Spirit.

Welcome to 8th Grade Math

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--- Curriculum Overview ---

In Grade 8, instructional time should focus on four critical algebraic areas: (1) formulating and reasoning about expressions and equations, including solving linear and nonlinear equations and systems of linear equations; (2) grasping the concept of a function, including linear, quadratic and exponential functions; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem; (4) investigating Real numbers and their properties.

The Number System
> Know that there are numbers that are not rational, and approximate them by rational numbers.

Expressions and Equations
> Work with radicals and integer exponents.
> Understand the connections between proportional relationships, lines, and linear equations.
> Analyze and solve linear and nonlinear equations, systems of equations, and quadratic equations.
> Represent and solve equations and inequalities graphically

Functions
> Define, evaluate, and compare linear and nonlinear functions.
> Work with linear, quadratic, and exponential functions.

Geometry
> Understand congruence and similarity, including geometric transformations.
> Understand and apply the Pythagorean Theorem.
> Solve real-world and mathematical problems involving volume of cylinders, cones and spheres.

The two 8th-grade math classes are:

Algebra: This course is based on the 8th-grade common core algebra concepts above, including numbers, expressions, and operations; characteristics and behaviors of functions; linear functions, equations, and inequalities; quadratic functions and equations and applying problem solving strategies throughout all units.

Accelerated Algebra: This course is based on the 8th-grade common core algebra concepts above and covers all topics at a faster pace with more demands for independent work, proficient basic math skills, and strong organizational skills.

--- Guidelines for Success ---
• Keep your Math Notebook neat, organized, and complete. Copy from the digital notebook if absent.
• Reread the math notes at the end of each class as a daily homework routine.
• Do the homework when it is assigned.
• Correct your homework carefully. Self-corrections occur at the start of class.
• Ask your teacher questions as they arise; don't wait until the day or two before the test.
• Complete checkpoint and test corrections. Be aware of deadlines.
• Check your grades through Alma at least once a week.

--- Required Materials & Supplies ---
All students are expected to have these materials with them in class, daily. Failure to bring materials to class will result in lost instructional time.
- Sharpened pencil
- Red pen (for correcting)
- Composition math notebook
- Glue stick or individual tape dispenser
- Scientific calculator
- Headphones/ear buds & <u>charged</u> Chromebook
- School-issued Student Planner
- Binder with unit packet materials (classwork/homework worksheets)

--- Grading ---
Students will receive a grade based on the following categories:

Standards (checkpoints) **50%** Tests **15%** Math Notebook **15%** Projects **10%** Homework **10%** _____ **Total 100%**	**A 95+** **A- 93-94.99** **B+ 90-92.99** **B 86-89.99** **B- 83-85.99** **C+ 78-82.99** **C 74–77.99** **C- 70-73.99** **D+ 67-69.99** **D 60-66.99** **F 59.99 and below**

Standards: Math checkpoints will be given out to target and assess a single standard. A checkpoint is a short assessment (generally 3 problems) of a particular math standard that the students work to master. **Checkpoints can be corrected for an improved score.**

> <u>**Math Checkpoint Scoring:**</u> All checkpoints will be collected and graded. Below is an example of a 3 problem checkpoint score.
>
> <u>SCORE = 3 (Meeting Standard)</u>-all three problems are correct; student is showing mastery of the standard
> <u>SCORE ≤ 2.5 (Approaching Standard)</u>-small mistakes have been made; understanding of key concept has been demonstrated, but student is inconsistent
> <u>SCORE ≤ 1 (Below Standard)</u>- zero problems are correct or major conceptual mistakes were made; this is a skill needing reteaching and focused practice.

Tests: A test will be given at the conclusion of every unit. Students will have a study guide and class reviews before the test. Tests should be completed independently. <u>Talking or cheating during a test is NOT allowed.</u>

Projects: Students will be given projects periodically throughout the year that focuses on applying mathematical skills and concepts in creative ways. Students will be given ample time to complete projects, in some cases extra class time. <u>Late penalties will occur for projects turned in after the due date.</u>

Math Notebook: This year students will be using a composition notebook to keep classwork and key learnings organized. The notebook will be used as a personalized reference book that can be helpful when completing checkpoints, projects, classwork, and homework. A digital copy of the notebook will be available on the class website and student google classrooms. Math Notebooks will be collected and graded at the end of each unit. Students are responsible for completing notes missed when absent from class.

Homework: Students will receive homework most days to reinforce key math concepts. <u>Homework is almost always due the next day</u>, unless otherwise specified by the teacher. Check student planner for details. Full credit will be awarded based on effort (neat, organized, all problems attempted) and completeness (all work shown). Late penalties will occur for late assignments, unless absent, and zero points will be given for missing or incomplete assignments.

--- Homework Coupons ---
Each student has ten Homework Coupons to use throughout the school year to replace a daily homework assignment. Students can retroactively use them on missing assignments within the current trimester. HW Coupons may not be used on study guides or projects, and only count as one Khan assignment. Homework Coupons will not be replaced if lost.

--- M.A.S.H. ---
Do you have questions from class that didn't get answered? Do you have missing assignments that need to be completed? Do you need help correcting assessments or have a math notebook that needs to be updated? Perhaps you just want a quiet space to work on a math project or math homework during the school day. M.A.S.H. (Math's Awesome Study Hall) is a great opportunity for middle schoolers to receive math support at OLG. I will be supervising an <u>optional math study hall on Tuesdays during lunch (11:30-12pm) in the Math Lab</u>. Bring your lunch and let's get to work!

--- Extra Credit ---
Extra credit assignments are given periodically and are for all students. Students have a ***choice*** whether they would like to participate or not. Extra credit will be offered at the teacher's discretion. Students should not rely on extra credit as a means for getting a high grade in the class.

--- Absences ---
Excessive absences should be avoided. In the event of an absence, the student is required to make up missed notes, classwork, and homework assignments. Students will be given sufficient time to make up the missed work, for full credit, or receive a zero for missing assignments. **Any student that is absent should first check with a classmate to find out what was missed.** Ask the teacher for clarification or additional questions if needed. <u>Assignments will not be available to complete early in cases of planned absences (ie. family trip).</u>

--- Need Extra Help? ---
If any student feels he/she needs extra help, has any questions, or needs to stay after school to make up work from an absence, they are encouraged to see me and set up a time.