

8th Grade Mathematics
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Course Description: In this course, we will cover a variety of topics including measurement, geometry, data analysis, linear equations, and linear functions. This material may seem challenging as students will transition from concrete to abstract thought, but they will develop many skills such as problem solving and critical thinking skills.

List of Expected Learner Outcomes:

The student will demonstrate through the mathematical process an understanding of:

- Problem solving, reasoning and proof, communication, connections, and representation
- Operations with integers, the effects of multiplying and dividing with rational numbers, the comparative magnitude of rational and irrational numbers, the approximation of cube and square roots, and the application of proportional reasoning
- Equations and linear functions
- The Pythagorean Theorem; the use of ordered pairs, equations, intercepts, and intersections to locate points and lines in a coordinate plane; and the effect of a dilation in a coordinate plane
- The proportionality of similar figures; the necessary levels of accuracy and precision in measurement; the use of formulas to determine circumference, perimeter, area, and volume; and the use of conversions within and between the U.S. Customary System and the metric system
- The relationships between two variables within one population or sample

Daily Required Materials

- WJHS Agenda
- Math Binder
- Graph Paper
- Pencils & erasers
- Calculator (TI-30XIIs or TI-84)

Homework Policy: Homework will be given throughout each unit. Homework is traditionally due the day after it has been given and will be assessed as a **completion grade**. Completed homework will be accepted with no penalty any time before the end of the unit.

Assessments: Each unit will include multiple formative assessments and 1 summative assessment. Students have the option to make a 3x5 notecard to use during each assessment. Each notecard will be turned in with the assessment and not returned. Retakes are available on these assessments.

Students will be required to take a midterm in the Winter and final in the Spring covering all curriculum prior to the assessment date. The midterm score will be one data point used for high school math placement. Both assessments will be entered into the gradebook. **Neither assessment qualifies for a retake.**

Retake Policy: Retake opportunities will be available to students wishing to improve their scores on assessments. Students must complete a retake contract, including additional practice to be eligible for a retake. Students may not retake an assessment if they have missing assignments from the current unit.

Classroom Grading Policy & Evaluation Policy:

Our class will be using a hybrid grading model. Students will receive a grade based on the following categories:

Summative Assessments	50%
Formative Assessments	30%
Assignment (includes classwork, projects)	15%
Participation/Homework	5%

Levels of Understanding: In class, students will be using Levels of Understanding to evaluate their progress within any specific learning goal. Below is the scale that we will be referring to.

Level	Classroom Description	WJHS Descriptions
3	**I understand this and I can do this on my own**	Meets Standards
2	I am beginning to understand this, but I still need help.	Approaching Standards
1	I am just starting to learn this. I don't understand it yet.	Still Developing Foundational Skills

****A Level 3 means that the student is proficient at the skill for our grade level. This is the goal for all students to achieve.**

Absences: Students must make up any missed work when absent from class. For each day absent, students have 1 school day to make up the work. Work given prior to a student absence is due when the student returns to school. In the event of a prearranged absence, students have the responsibility to make arrangements with the teacher to “make up” missed work.

Extra Credit Policy & Procedures:

Extra credit is not given. Students may always turn in missing assignments and retake assessments after completing the required practice to help improve their overall grade.

Communication:

Please send me an email or give me a call if you have any questions or concerns you would like to discuss. **Lessons and grades will be updated in OTUS.**

Handle with Care

If your family is experiencing difficulties at home, I would like to provide additional support at school. I understand that you are not always able to share details and that's okay. If your child is coming to school after a difficult night, morning, or weekend, please email me “Handle with Care”. Nothing else will be said or asked. This will let me know that your child may need extra time, practice, or help during the day.

What to Expect from the Teacher

- A structured class that challenges each student to do his or her best.
- A “Personal Trainer” for computation.
- A respectful environment.
- Additional help when needed.

What the Teacher Expects from Students

- Show up to class on time, prepared, and ready to try
- A positive and respectful attitude to ensure each student's personal best.

Essential Standards:

8M_EE_LT1: I can solve multi-step equations with rational coefficients.

8M_F_LT5: I can identify a function by rule, graph, or table.

8M_F_LT6: I can sketch and analyze graphs of functions.

8M_EE_LT9: I can create and graph linear equations.

8M_F_LT10: I can compare functions represented in different forms.

8M_EE_LT11: I can solve and interpret a system of equations by graphing.

8M_G_LT14: I can verify congruency through a sequence of translations, rotations, and reflections.

8M_G_LT15: I can verify similarity through a sequence of transformations, including dilations.

8M_G_LT18: I can find the distance between two points using the Pythagorean Theorem.

8M_EE_LT19: I can apply the properties of integer exponents.

8M_EE_LT21: I can perform operations expressed in scientific notation.

8M_EE_LT25: I can evaluate perfect square and cube roots.

8M_NS_LT26: I can approximate the value of irrational numbers and locate them on a number line.

8M_G_LT27: I can calculate the volume of cones, cylinders, and spheres in real world contexts.