Tug Valley High School
College and Career Ready

Integrated Math 2
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Course Description:
Integrated Math 2 is the second class of a high school mathematics sequence. The courses are designed to build upon each other, increasing in difficulty and application of patterns, modeling and conjectures to develop a student's understanding and competency in mathematics.

Students will be assessed throughout the school year. Released SAT exams will be used along with Exact Path Assessment. The tests are designed to measure student progress and identify specific strengths and needs. Assessments will ultimately drive the instruction.

2 days – SAT Pretest – First week of School
2 days – 1st Exact Path Assessment – August -September
2 days – 2nd Exact Path Assessment – TBA
2 days – 3rd Exact Path Assessment – TBA
2 days – SAT Posttest – TBA

Attendance:
Regular attendance is essential to excel in this class. Students who are absent will be allowed to complete make-up work; however, it is important to remember that frequent absences will result in missing essential instruction, making the completion of the assignment more difficult.

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

Week(s)	Unit	Standard	Method(s)/*Activities*
1	Function Families	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of quantities – **M.2HS.7** Graph functions expressed symbolically and show key features of the graph – **M.2HS.10**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy

		Compare properties of two functions each represented in a different way – **M.2HS.12**	• Desmos Program *A Picture is worth a thousand words Activity* *A Sort of Sorts Activity*
1	Solving Linear Equations and Inequalities	N/A	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum
2	Linear/Linear Piecewise	Write a function that describes a relationship between two quantities – **M.2HS.13** Create equations and inequalities in one variable and use them to solve problems – **M.2HS.20**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program

			• Teacher Made Lessons • HMH Curriculum *CBR Lessons*
4	Linear Topics (Slope, Slope-Intercept Form, Parallel and Perpendicular Lines, Deriving Linear Equations)	Calculate and interpret the average rate of change of a function – **M.2HS.9** Graph functions expressed symbolically and show key features of the graph – **M.2HS.10** Create equations and inequalities in one variable and use them to solve problems – **M.2HS.20** Create equations in two or more variables to represent between quantities – **M.2HS.21**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum *Linear Equation Project and Presentation*
1	Literal Equations	Rearrange formulas to highlight a quantity of interest – **M.2HS.22**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons

			• HMH Curriculum
2-3	Linear Regression	**M.2HS.9, M.2HS.10, M.2HS.21**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum *Monopoly Activity* *Penny/Spaghetti Activity* *Bungee Jump Activity*
2-3	System of Equations	**M.2HS.9, M.2HS.10, M.2HS.21**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum *SAT Problems*

1-2	Exponents	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values – **M.2HS.1** Rewrite expressions involving radicals and rational exponents using the properties of exponents – **M.2HS.2**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum *Discovery of Rules Activity*
2-3	Polynomials	Understand that polynomials form a analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials – **M.2HS.6**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum
2-3	Graphing Quadratics	**M.2HS.7, M.2HS.10, M.2HS.12** Relate the domain of a function to its graph **-M.2HS.8**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program

			• Teacher Made Lessons • HMH Curriculum
2-3	Factoring Quadratics	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function – **M.2HS.11**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum
2-3	Quadratic Formula	Solve quadratic equations in one variable using the quadratic formula – **M.2HS.23**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum
2	Complex Numbers	Know there is a complex number i such that i^2 = -1, and every complex number has the form a +bi with a and b real – **M.2HS.4**	• Bell Ringers • Lecture • Vertical Whiteboards

		Add, subtract, and multiply complex numbers – **M.2HS.6**	• Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum
2-3	Right Triangle Trig	Use right triangle tri and Pythagorean Theorem to find missing sides and angles – **M.2HS.50**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum *SAT Problems*
2	Quadratic Formula with Complex Solutions	Solve quadratic equations with real coefficients that have complex solutions – **M.2HS.24**	• Bell Ringers • Lecture • Vertical Whiteboards • Khan Academy • Desmos Program • Teacher Made Lessons • HMH Curriculum

Dear families,

I am going to work on moving my classroom to where students learn with a growth mindset (the belief that one is in control of their own ability and can learn and improve). In order for me to do this I have to take the fear of failing out of my instruction. I will be incorporating the following things:

- Students will receive only two grades 9 weeks.
- Test and quizzes will not have a letter grade, but they will inform students on how well they did through written feedback.
- Homework will be checked for completion.
- Students will upload test, quizzes and a statement of how successful they are on completing their assignments, including homework on an online portfolio.
- When it is time for progress reports and report cards, students will be bringing a form home that will be completed by the student, along with you, using the online portfolio to record how they are doing along with the grade they think they have deserved.
- The following day the student will conference with me and defend their grade using their portfolio as defense.

Please provide your email so that you will have access to your child's portfolio.

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Email

This is a big change from how I usually do things, but I do think that my students will reap the benefits. Through this process, my students will be more focused on their learning and how well they are doing rather than worrying about failing exams.

If you have any questions or concerns, please don't hesitate to contact me.

Sincerely,

Steven Alley