

Honors Integrated Mathematics II

Fall Semester 2017

Teacher: Ms. Walczak (Wall-zack)

Phone: 793-5950 ext. 1210

E-mail: marissa.walczak@rimsd41.org

Materials: Notebook/Folder/Binder, Writing Utensil (multiple colors preferred), Textbook

Topics: Properties of Exponents and Rational Exponents
Other Types of Functions

Quadratic Functions
Probability

Grades: Daily Assignments & Projects – 20%
Quizzes & Tests – 80%

Homework: There will not be daily homework. If homework given, it is probably very important. Examples of homework assignments might be to get a guardian's signature, complete a reflection, or study for an assessment. **If you would like extra practice, please ask!**

Projects: Projects are assigned periodically within each semester. Due dates for projects will be given when they are assigned. Projects turned in late will be deducted 10% each day that they are late up to a maximum of 50%. If an assignment is turned in more than 5 days late it will still be deducted just 50%.

Quizzes: Most chapters will consist of at least one quiz. If you are absent the day of a quiz, you may make up any work and therefore may complete a quiz. You may retake any and all quizzes once; the higher of the two grades will be your quiz grade. To retake a quiz you must meet with Ms. Walczak to discuss the retake procedures (you will have to do some extra practice to **prove** you will not get the same types of questions wrong) AND correct the original quiz.

Tests: There is one test per unit. Each test will be graded based on 100 points, regardless of the number of questions. A study guide will be given before each test that will mirror the actual test. Completing this study guide will not be a requirement, but it is highly recommended.

YOU MAY NOT RETAKE TESTS!!!!

Final Exam: The final exam will be 10% of the semester grade. All learners will be required to take the final exam.

Tardies: Class begins when the bell rings. If you are not in the classroom when the bell rings you will be counted tardy. Every minute of this class is important, so please do your best to be on time.

Hall Passes: Hall passes are a privilege and not a right. You must fill out your planner whenever you get a pass from me. In addition, no passes will be written the first or last ten minutes of class.

Classroom Rules:

All school rules also apply in Ms. Walczak's class!

Class Norms:

- Everyone can learn math to the highest levels
- Mistakes are valuable
- Questions are really important
- Math is about creativity and making sense
- Math is about connections and communicating
- Depth is more important than speed
- Math class is about learning not performing

Useful Apps:



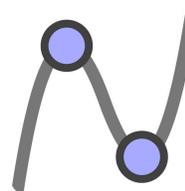
Desmos



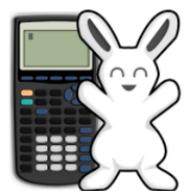
Google
Classroom



Google Docs



Geogebra



Wabbitemu
(Android)

Do you remember how excited your children were about maths* when they were young? How they were excited by patterns in nature? How they rearranged a set of objects and found, with delight, that they had the same number? Before children start school they often talk about maths with curiosity and wonder, but soon after they start school many children decide that maths is confusing and scary and they are not a “math person”. This is because maths in many schools is all about procedures, memorization and deciding which children can and which cannot. Maths has become a performance subject and students of all ages are more likely to tell you that maths is all about answering questions correctly than tell you about the beauty of the subject or the way it piques their interest.

Given the performance and test-driven culture of our schools, with over-packed curriculum and stressed out students, what can parents do to transform maths for their children? Here are some steps to take:

1

Encourage children to play maths puzzles and games. Award winning mathematician, Sarah Flannery reported that her maths achievement and enthusiasm came not from school but from the puzzles she was given to solve at home. Puzzles and games – anything with a dice really – will help kids enjoy maths, and develop number sense, which is critically important.

2

Always be encouraging and never tell kids they are wrong when they are working on maths problems. Instead find the logic in their thinking – there is always some logic to what they say. For example if your child multiplies 3 by 4 and gets 7, say – Oh I see what you are thinking, you are using what you know about addition to add 3 and 4, when we multiply we have 4 groups of 3...

3

Never associate maths with speed. It is not important to work quickly, and we now know that forcing kids to work quickly on maths is the best way to start maths anxiety for children, especially girls. Don't use flashcards or other speed drills. Instead use visual activities such as <https://bhi61nm2cr3mkgk1dtaov18-wpengine.netdna-ssl.com/wp-content/uploads/2015/03/FluencyWithoutFear-2015.pdf>

4

Never share with your children the idea that you were bad at maths at school or you dislike it – especially if you are a mother. Researchers found that as soon as mothers shared that idea with their daughters, their daughter's achievement went down.

5

Encourage number sense. What separates high and low achievers is number sense – having an idea of the size of numbers and being able to separate and combine numbers flexibly. For example, when working out $29 + 56$, if you take one from the 56 and make it $30 + 55$, it is much easier to work out. The flexibility to work with numbers in this way is what is called number sense and it is very important.

6

Perhaps most important of all – encourage a “growth mindset” let students know that they have unlimited maths potential and that being good at maths is all about working hard. When children have a growth mindset, they do well with challenges and do better in school overall. When children have a fixed mindset and they encounter difficult work, they often conclude that they are not “a math person”. One way in which parents encourage a fixed mindset is by telling their children they are “smart” when they do something well. That seems like a nice thing to do, but it sets children up for difficulties later, as when kids fail at something they will inevitably conclude that they aren't smart after all. Instead use growth praise such as “it is great that you have learned that”, “I really like your thinking about that”. When they tell you something is hard for them, or they have made a mistake, tell them: “That's wonderful, your brain is growing!”



** I use maths, rather than math, partly because I am from the UK and we say maths there and partly because maths is short for mathematics, it is a plural noun. Mathematics was chosen to be plural to reflect all the many parts of mathematics - drawing, modeling, asking questions, communicating, etc. Math sounds more singular and narrow (Do the math, usually means do a calculation!), and I prefer to keep the idea that maths is a multidimensional and varied set of mathematical forms and ideas.*

Online Courses for
Students, Teachers and Parents
<https://www.youcubed.org/category/mooc/>

Student Page
<https://www.youcubed.org/students/>

Parent Page
<https://www.youcubed.org/parents/>

Recommended Apps and Games
<https://www.youcubed.org/category/teaching-ideas/math-apps/>

More Information about Brain Science
<https://www.youcubed.org/think-it-up/>

Jo's Mindset Book
<http://tinyurl.com/qxhnqsh>

Maths Tasks to Do At Home
<https://www.youcubed.org/tasks/>

Summer Camp Video
<https://www.youcubed.org/youcubed-summer-math-camp-2015/>

Week of Inspirational Maths Curriculum
<https://www.youcubed.org/week-of-inspirational-math/>

Dear Parents/Guardians,

I am asking that you provide me with your phone number and email address to ensure that I have the correct information in the event that I would need to contact you. I send an email update every unit and learners will also be sending updates home with their grades, so providing an email address is very important if you have one. I would also ask that you **keep this portion of the page** so that if you need to contact me you have the correct information.

Please contact me if you have any questions or concerns. You may call me at the number listed below to leave me a message and I will return your call as soon as possible. Or, you may send me an email, which I do my best to respond to within 24 hours. Please don't forget that you can check your learner's grade online! You can also see a lot of information on my website **walczakmath.com** or get an inside look at our classroom by following us on Twitter:

@MsWalczakMath #HIMath2

It would also really help me if you could complete a survey to help with our communication. It will only take a few minutes to complete: <http://bit.ly/walczakparent>

Thank you,

Ms. Walczak
marissa.walczak@rimsd41.org
(309) 793-5950 ext. 1210

Learner Information Sheet

Learner Name	
Parent/Guardian Name(s)	
Best Guardian Phone Number	
Best Guardian Email Address	
Learner Email Address	

Please put a star (*) next to the preferred way for Ms. Walczak to contact home.

I certify that I have read this Honors Math II Syllabus and agree to its contents.

Learner Signature: _____ Guardian Signature: _____

Honors Integrated Math II

Ms. Walczak

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walczakmath.com

What topics will my learner study this semester?

- Properties of Exponents and Rational Exponents
- Other Types of Functions
- Quadratic Functions
- Probability

How will my learner be graded?

- Daily Assignments & Projects – 20%
 - No daily homework – mostly just signatures, reflections, and studying for assessments
- Quizzes & Tests – 80%
 - All quizzes can be retaken once – Learners must meet with Ms. Walczak before being able to retake a quiz
 - Tests are at the end of the big units and cannot be retaken

What can my learner do if he/she is struggling with the math?

- Email Ms. Walczak (marissa.walczak@rimsd41.org), or come in for Enrichment (7:53 am) or after school!
- Ask a classmate!
- Check for videos online that could help!
- DO NOT give up!

There is no “math gene”. EVERYONE has the ability to be successful in high-level mathematics.