

## Summer Math Assignment Incoming 8<sup>TH</sup> Grade

Dear Parents of OLA Middle School Students,

Experts from Johns Hopkins University, the University of Tennessee, the University of Virginia and elsewhere say most students, regardless of family income or background, lose 2 to 2 1/2 months of the math computational skills that they learned during the school year. These findings suggest the obvious, children lose math ability when they don't use it.

This summer, to prevent this learning loss, keep the students' math computational skills sharp, and to reinforce the skills that they learned this year, we will be using an interactive website math program, IXL. It is our hope that this will help all of our students enter their next math course well prepared and ready to go!

Over the summer, students are expected to complete at least **10 hours** of math skills practice within IXL. Our hope is that the review will take place over the entire summer rather than during the last few days before we return to school. Ideally, your child will be working on IXL about three times a week over the course ten weeks. All work should be completed between **June 15<sup>th</sup> and August 31<sup>st</sup>**. **Work completed after this deadline, although great, WILL NOT be counted towards your grade.** If you do not have a home computer, we encourage you to visit a local library or partner with a friend with internet access.

The summer assignment will be graded based on the amount of time spent actively working on IXL and it will be weighted as the equivalent of a test - 100 points. Thus, each  $\frac{1}{2}$  hour fully completed is worth 5 points. Any student who goes above the assigned 10 hours will receive 1 point of extra credit for each extra hour of work they do! It is an easy way to start the term with an A+!

It is our hope that the students will find this a valuable opportunity. If you have any questions, please feel free to contact me. [Patricia.fothergill@ourladyacademy.org](mailto:Patricia.fothergill@ourladyacademy.org)

Thank you for your support!

Patty Fothergill

Dear Students,

This summer you need to practice **AT LEAST ten** hours of math skills on IXL. For each section listed below, you should reach a "smart score" of at least 80. Getting started is easy! Sign on to IXL using your username and password assigned during the school year. Choose the 7<sup>th</sup> grade tab, select a skill from the checklist attached and start answering questions! If you answer a question correctly, you will be given another question. If your answer is wrong you will be given an explanation of why your answer is wrong. Once you understand it, click on "Got it" and you will be given another question.

The skills you are assigned will be needed in the course you are entering in the fall. If you encounter an assigned skill that you don't remember, or think that you have not learned, you can view tutorials on the topic at [www.khanacademy.org](http://www.khanacademy.org) as well as other websites you find helpful.

The checklist refers to the 7<sup>th</sup> **Grade material** that each of you need to work on. Individually, I have attached a report of trouble spots you encountered during the school year. These are areas that **you** need to work on to improve **your** knowledge. When working on these individual areas of trouble, you might need to watch Khan Academy videos and do some practice on the concept at a lower grade level to start.

If you complete the material in your grade level before you have spent 10 hours working, please either go back to the sections you had most difficulty with and try to beat your previous score **OR** challenge yourself by finding the corresponding skill in 8<sup>th</sup> grade and attempt those problems!

If you have any questions, email me! My email is [patricia.fothergill@ourladysacademy.org](mailto:patricia.fothergill@ourladysacademy.org). I will answer within a day or two.

Have a great summer!

Mrs. Fothergill

## Number theory

- Prime factorization
- Greatest common factor
- Least common multiple
- Scientific notation

## Integers

- Absolute value and opposite integers
- Compare and order integers

## Operations with integers

- Add and subtract integers
- Add and subtract integers: word problems
- Multiply and divide integers

## Operations with decimals

- Add and subtract decimals
- Multiply decimals
- Divide decimals

## Operations with fractions

- Add and subtract mixed numbers
- Multiply mixed numbers
- Divide fractions

## Rational numbers

- Convert between decimals and fractions or mixed numbers
- Compare rational numbers

## Exponents and square roots

- Understanding exponents
- Evaluate exponents

## Ratios, rates, and proportions

- Identify equivalent ratios
- Do the ratios form a proportion?
- Solve proportions

## Percents

- Convert between percents, fractions, and decimals
- Percents of numbers and money amounts
- Percent of change

## Consumer math

- Unit prices
- Sale prices: find the original price
- Estimate tips

## Expressions and properties

- Write variable expressions
- Evaluate linear expressions
- Evaluate multi-variable expressions
- Evaluate absolute value expressions

## One-variable equations

- Which  $x$  satisfies an equation?
- Solve one-step equations

## Two-dimensional figures

- Name, measure, and classify angles
- Classify quadrilaterals
- Interior angles of polygons
- Lines, line segments, and rays

## Three-dimensional figures

- Bases of three-dimensional figures
- Front, side, and top view

## Geometric measurement

- Area of rectangles and parallelograms
- Area of triangles and trapezoids
- Circles: calculate area, circumference, radius, and diameter
- Volume
- Surface area

## Statistics

- Calculate mean, median, mode, and range
- Interpret charts to find mean, median, mode, and range

## Probability

- Probability of simple events
- Experimental probability