

Summer Math Work for The Class of 2023

Dear Class of 2023,

Congratulations on almost finishing the school year! Summer is here, but the good news is that math continues even when school is closed. Yay! The goal of math work over the summer is primarily to maintain or improve your math skills and mastery of this past school year's material. It also allows you to explore new topics and keep your math mind moving! Follow the directions below and have a mathalicious summer!

Ed & Jiazhen

1. Finish 85% or more of the 7th grade ALEKS. This will ensure that you have practiced and mastered the bulk of the 7th grade material, which we will build on in 8th grade. Some of you have already been moved into the 8th grade ALEKS. You can work on that as well, but you are not required to finish a certain percentage over the summer.
2. Complete **at least three problems from each** of the **10 Summer Review Worksheets**. These will be posted on Google Classroom. If you have trouble with a problem, look up topics on Khan Academy or ALEKS. We will have a review test based on these problems at the beginning of the next school year.
3. **OPTIONAL:** Explore math in one or more of the following ways. **FOR ANY OF THESE ACTIVITIES, WRITE DOWN A SUMMARY OF WHAT YOU DID AND WHAT YOU LEARNED.** You will turn this in during the first week of school.
 - Use the following link to join the “Class of 2023 Summer Math Exploration” at brilliant.org. You have three modules to choose from: “Joy of Problem Solving”, “Prealgebra” and “Introduction to Algebra”. Feel free to pick any one of the modules to work on. Make sure you write down the questions you worked through and keep a journal of your problems and solution paths.
<https://brilliant.org/classroom/join/yrekap/>
 - Read one of these books below and write a short book report. These books are all available on Amazon. Feel free to read the summary and reviews *before* you buy them. Your report could be about a particular chapter, section, or a problem from the book.
 - Any one of these titles by Alex Bellos: *Here is Looking at Euclid*; *The Grapes of Math – How Life Reflects Number and Numbers Reflect Life*; *Alex’s Adventures in Numberland*;
 - *Really Big Numbers* by Richard Evan Schwartz
 - *The Number Mysteries: A Mathematical Odyssey through Everyday Life* by Marcus du Sautoy
 - *Giant Pumpkin Suite* by Melanie Heuser Hill
 - *Professor Stewart’s Cabinet of Mathematical Curiosities* by Ian Stewart

These next three books are a little more rigorous read. But nevertheless, lots of fun.

- *A History of π* by Peter Beckman
- *Humble Pi: When Math Goes Wrong in the Real World* by Matt Parker
- *The Simpsons and Their Mathematical Secrets* by Simon Singh

- Take a free, self-paced, online class called “How to Learn Math,” provided by mathematical mindset guru Jo Boaler of Stanford University. The course teaches strategies and presents research to help you develop your growth mindset and engage in math in a meaningful way. And there are some fun problems as well! Go to <https://lagunita.stanford.edu/courses/Education/EDUC115-S/Spring2014/about> for more information.
- Create your own math adventure.
 - Create a video to explain a math concept or a math problem, demonstrate math in nature, or a concept you read about from one of the suggested books.
 - Make a game that uses math. (Think about the probability game we played.)
 - Write a comic book with a mathematical theme.
 - Write a mathematical mystery in which the solution depends on a mathematical concept. Check out examples at <http://teacher.scholastic.com/maven/timefor/index.htm>
<http://teacher.scholastic.com/maven/cuckoo/index.htm>