

6th Grade Math: It's About Relationships! Course Syllabus

Part 1: Course Information

Instructor Information

Instructor: Kris Nielsen

Bio: Kris has been a teacher for 11 years, as well as a project coordinator and technology implementation specialist in public and charter schools. He has intense experience in 1:1 and shared technology classrooms, learning the best ways to present new and complex ideas to middle-level students, and making learning fun!

Course Description

Using problem-based learning and student inquiry, this homeschool math course has it all! Even a video course can involve engaging activities, student-led discovery, and some hands-on manipulation with materials from around the home. This course is comprehensive, cohesive, and teaches students how to reason and think through problems, rather than 100% rote memorization. It was also designed to help prepare students for reintegration with traditional schools, if that becomes a choice.

Prerequisites (some review of these skills will take place):

- Good background in adding, subtracting, and multiplying fractions
- Good background in adding, subtracting, multiplying, and dividing multi-digit numbers (e.g. long division)

Textbook & Course Materials

Textbook

- There is no textbook for this course; however, extra practice can be found in old 6th grade textbooks in libraries or second-hand stores.

Recommended Materials:

- Spiral notebook or composition book for the Math Journal
- TI-30 calculator (or the like); a basic 4-function calculator will work just fine! You can also use an online or computer calculator.

Course Requirements

- Computer or laptop (recommended) or smartphone/tablet
- Chrome or Firefox browser
- Internet connection (DSL, LAN, or cable connection desirable)
- Quiet area for viewing lectures and doing exercises
- The ability to find help at home, as needed, or from outside tutors

Course Structure

The course is entirely online, and totally self-paced! Once payment is received, you will have lifetime access to the whole course.

For most lectures, you will see a video to watch and on which to take notes, followed by a PDF file with some exercises to try. Then, you will see another video (Exercise Review Video) where you can check your answers with me! Some lectures will only be accompanied by notes or other resources, but the majority of them include exercises.

You will also find extra practice files for some of the lectures. These will include answer sheets, but no review videos.

Finally, you will come across quizzes at various spots in the course. These are designed to check your understanding up to that point. A final exam can be found at the end of the course.

Technical Assistance

If you need technical assistance at any time during the course, or to report a problem, you can:

- Visit the Help section to read about the problem
 - Contact me with your question (please allow up to 24 hours for a response)
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Part 2: Course Objectives

The main objectives of the course are as follows:

- Students will master the four arithmetic operations with positive and negative numbers, whole numbers, fractions, and decimals.
- Students will use ratios to compare data sets. They will begin using integers and percents solve problems in real life.
- Students will be introduced to algebraic terms and solving algebraic equations in one variable.
- Students will classify and measure two- and three-dimensional figures and will make conversions within a given measurement system.
- Students will collect, analyze, display, and interpret data by using a variety of graphical and statistical methods.

Mastery of the course can be defined as working toward 100% correct on all quizzes, and at least 80% on the Final Exam.

Meeting these objectives can assure that students are prepared for 7th grade math and beyond.
