



Division 4

Linear Algebra Course Outline and Expectations

THE RENERT SCHOOL AT ROYAL VISTA

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A. The main goal of mathematics education is to help students:

- Build strong analytical skills
- Demonstrate flexibility and creativity of thought
- Solve problems analytically by using mathematical processes
- Communicate and reason mathematically
- Appreciate and enjoy the beauty and value mathematics
- Develop the ability to prove, reason, and advocate a position logically and intelligently

B. General Outcome of this course is to continue to expand the skills developed in previous math courses. This is our last High School level math course, and the credits obtained count towards high school graduation. We will cover the following units of a standard, university-level linear algebra course: systems of linear equations and matrices, inverse of a matrix, determinant of a matrix, Euclidean vector spaces, and general vector spaces. Topics are introduced in a way that fosters complete understanding of underlying concepts, as well as mastery of all related proofs and definitions. At Renert we “do” mathematics by understanding, not by memorization.

C. Required Materials

- Brain
- 3-ring binder with graph paper
- Pens, pencils, highlighters, coloured markers, erasers
- All study materials (books, handouts etc.) will be provided to the students in class

D. Digital Communication

- I have a course website at <https://vchan2.github.io/2022LinearAlgebra.html> which will contain important information (such as exam information and homework) and publicly available resources.
- There is an online community for this class on www.schoology.com. Students and parents will be able to access important information like deadlines, assignments and handouts from this webpage. The Class Access Code is: **[see me for code]**. Please join the course; this is my main way of giving you secure information that should not be made public.

E. Student Expectations

As our students move into senior high mathematics, the material gets deeper and more involving. In order to get stronger as mathematicians, and to be well positioned for college and university level mathematics, I expect you to:

- Treat yourself, your teachers and the subject matter with the same respect you deserve and would like to be treated with.
- Get organized!!! Mathematics is a highly structured language that is written in a very particular way. Understanding how to think mathematically is half the battle; the other half is presenting your solution in a way that makes perfect sense to another fellow human.
- Adopt a good attitude and an open mind towards the subject matter. Mathematics is the crowning jewel of human thought. It is intriguing, beautiful, fun, and exciting. It has enriched countless lives and can do the same for you. Attend class not only in body but also in spirit.
- Come to class prepared. Read/watch all the assigned materials. Attempt to solve all assigned problems. **Homework at the Renert School is not optional.** Math is not a spectator sport: you learn it by practising, solving problems and participating. It is an expectation that you complete your homework.
- Have perseverance. The only way to improve in mathematics is by doing mathematics. Failing is part of the experience; do not despair if you do not get all the right answers right away (nobody does). The best learning is by trial and error. Use the marking keys but do not abuse them; there is a fine line between the two.
- Participate in class and ask questions: if you do not know something, quite a few of your friends around you struggle with it as well.
- Help one another and get help when needed. By helping your peers, or getting them to assist you, everyone's learning is being greatly enhanced.
- Attend all classes. Regular attendance is crucial to be successful in this course. You are expected to come to all classes on time and be ready to work. **It is your sole responsibility to make up for missed classes** by getting notes from a friend who attended and going to the Tutoring Centre if you need help to catch up. Saying "I did not know what the homework was because I missed class" is not acceptable at our school.
- Take good class notes so that you always have a reference. Your binder showcases your learning. Keeping your notes organized in your binder will also help to improve your learning.

Also:

- You may bring a water bottle with a lid to class if you need to drink a lot.
- Cheating is **not** tolerated under any circumstances! Integrity is valued and expected of all Renert Students. Copying answers wholesale from marking keys or friends, presenting someone else's work as yours, being untruthful about not having done homework or cheating on exams are all considered severe academic misconducts that may lead to a failing grade in the entire course.

I have read, understood and intent to do my utmost to meet all above expectations:

Student name: _____

Student signature: _____

Date: _____

Parent signature: _____

(Parent should be familiar with this list of expectations, and make sure student understands them)