

Applied Mathematics 40S

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Welcome to Grade 12 Applied Math!

Grade 12 Applied Math 30S is intended for students considering post-secondary studies that do not require a study of theoretical calculus. It is context driven and promotes the learning of numerical and geometrical problem-solving techniques as they relate to the world around us. It builds upon the foundation knowledge and skills from Grade 11 Applied Math. Primary goals of Applied Math 40S are to have students develop critical-thinking skills through problem solving and model real-world situations mathematically to make predictions.

Applied is a fast paced, intense course where students must be prepared to put consistent effort into daily homework and assignments in order to keep up with the work. **Students will have homework and/or review every night.**

If you don't understand something, please ask! Sharing your questions or comments during class helps me teach the class and helps you and your classmates learn.

Evaluation

You will never be surprised with any assessments. I will always give you an outline of how you will be assessed and what you will be assessed on. You will need to keep up with your homework, study, and work hard to do well in this course and take advantage of this learning opportunity you have been given.

Course material will be weighted as follows. Remember that you always have a chance to improve a mark. Do not give up on learning an outcome.

Term (70%):

Knowledge and Understanding	50%
Problem Solving	30%
Mental Math and Estimation	20%

Exam (30%)

Note: All assignments are due at the **beginning** of class.

*The essence of
mathematics is
not to make simple
things
complicated, but
to make
complicated things
simple. ~S.
Gudder*

Extra Help

Grade 12 Applied is an extensive course that covers many different topics and requires understanding rather than memorization. Students who are attending regularly and putting in effort will have no problems succeeding in this course.

Please use these opportunities to receive some individual help if and when you need it.

- Tuesdays and Thursday at lunch – Please let me know that you are planning on coming. These times are subject to change based on other commitments I have that week at lunch.
- Other times by appointment.

Required Materials

3 ring binder, paper, dividers, pen/pencil, scientific calculator, graph paper

Required Course Outcomes*

Investing and Borrowing Money:

- Solve problems that involve compound interest in financial decision making
- Analyze costs and benefits of renting, leasing, and buying
- Analyze an investment portfolio in terms of: interest rate, rate of return, total return.

Logical Reasoning:

- Analyze puzzles and games that involve numerical and logical reasoning, using problem-solving strategies.
- Solve problems that involve the application of set theory
- Solve problems that involve conditional statements

Probability:

- Interpret and assess the validity of odds and probability statements.
- Solve problems that involve the probability of mutually exclusive and non-mutually exclusive events.
- Solve problems that involve the probability of independent and dependent events.
- Solve problems that involve the fundamental counting principle, permutations and combinations.

Relations and Functions:

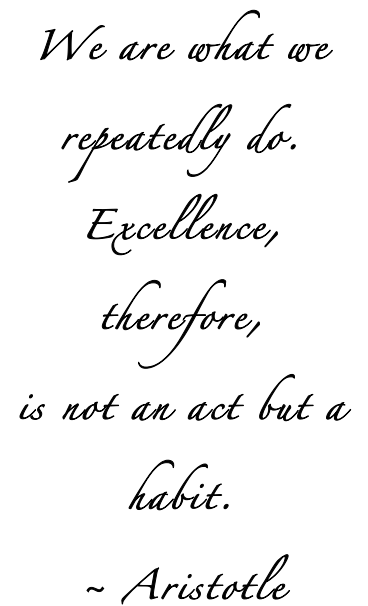
- Represent data, using polynomial functions to solve problems
- Represent data, using exponential and logarithmic functions, to solve problems
- Represent data, using sinusoidal functions, to solve problems

Mathematics Research Project:

- Research and give a presentation on a current event or an area of interest that involves mathematics

Design and Measurement:

- Analyze objects, shapes, and processes to solve cost and design problems.



*We are what we
repeatedly do.
Excellence,
therefore,
is not an act but a
habit.
~ Aristotle*