Secondary 2 Mathematics
(2019-2020)

List of course teachers and contact information:

Teacher:	Email:	Phone:
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Resources: Loyola Math Unit Booklets
Online resource (homework and explanations): IXL (ca.ixl.com)
A subscription to IXL is provided by Loyola.
Students must use their **Loyola** IXL account.

Website: Class notes and relevant links will be available on http://moodle.loyola.ca
Students must also subscribe to the class Google Classroom feed using their
Loyola e-mail account.

Supplies: **- Pencils, eraser, ruler, compass, protractor**
- Duo-tangs, in which students should keep handouts, quizzes and tests,
with:
- loose-leaf sheets (20 pages to start),
- graph paper (10 pages to start)

Calculators **will not be permitted** during some units but **will be required** in
other units, and students are responsible for purchasing a TI-30X calculator
from the school store. (iPads may not be used as calculators in class.)

Competencies and Evaluation (This is a guideline; final weightings may vary)**:**

Communication & Reasoning: 70%
(Reasoning Tests, Quizzes, Homework);

Situational problems: 30%.

 In Term 2, a Cumulative Reasoning Test will be given prior to the Christmas break.

In Term 3, June exams count for 50% of the term mark and cover the entire year's work.

The final course mark is calculated as: Term 1 – 20%   Term 2 – 20%   Term 3 – 60%.

Homework: Homework is usually assigned daily. It will be checked regularly and graded occasionally. Review and practice are essential to understanding and retaining the information taught.
Failure to complete homework on time will result in a loss of grades and/or disciplinary action.

Quizzes: Quizzes may be given **without prior warning** to evaluate day-to-day understanding and to verify homework comprehension.

Tests: Tests will evaluate the course content and competencies and there will usually be 3-5 tests per term. A major consideration in this course is the students' ability to solve **Situational Problems**.

Tutorials: The math department offers extra help on a regular schedule. A math teacher is always available after school to provide extra help in room 251. In addition, individual teachers offer extra help sessions according to their posted schedules. Be sure to get help right away when difficulty arises.

Technology: iPads must be charged and be ready for use. iPads remain in bag until requested.

General: Students are expected to further develop their work ethic, study habits and time management skills as they continue their progress to becoming independent and active learners.

Do not lose this IMPORTANT document. It can serve as a basis for your study guide for the entire year.

Units Covered

Term I
Algebraic Calculations
Definitions: Constant, variable, coefficient, like terms
Operations with variables (+, −, x, ÷)
Multiplying monomials/Distributive property
Generalizing situations using algebra

Pythagorean Theorem
Solving for the third length of a right-angled triangle

Various Modes of Representation
Cartesian plane: - axes, origin, quadrants
                  - locating and placing points on the Cartesian plane
Graphing: - making and interpreting graphs
Independent and dependent variables.
Producing tables of values and finding the related rule (linear situations)

Proportions
Comparing and interpreting rates and ratios: - unit rate method
                  - common denominator method
                  - quotient method
Units estimation/conversion
Proportional situations - describing and identifying in table and graph form
Finding a term in a proportion: - factor of change method
                  - unit rate method
                  - cross multiplication method
Recognizing and solving similar figures
Similar figures: Enlargements and reductions
Similar figures: Ratios of lengths/perimeters/areas

Term II
Algebraic Equations
Solving algebraic equations by producing equivalent equations
Solving word problems using equations

Circles and Polygons
Definitions and Properties: Radius, diameter, circumference, chord, arc.
Calculating circumference, radius, arc length and sector area
Definitions: convex, concave, regular, irregular, names of polygons
Sum of interior angles (for all types of polygons), calculating missing angles
Perimeter and area of polygons

Term III
Statistics and Probability
Definitions, Concepts, Listing outcomes/tree diagrams.
Measures of central tendency: mean, median, mode
Measuring chance, Probability of outcomes with several steps, Probability trees

Solids
Definitions: Prism, Cylinder, Pyramid, Cone, Sphere
Nets of solids and surface area
Volume of solids and of decomposable solids

Algebraic Factoring
Greatest Common Factor