CLARKSON SECONDARY SCHOOL

Course Code: MBF 3C

Course Name: Foundations for College
Grade 11 College

Prerequisite: MFM 2PO

Material Required:
Foundations for
College Mathematics 11

Textbook Replacement Cost:
  $100

Course Description

This course enables students to broaden their understanding of mathematics as a problem solving tool in the real world. Students will extend their understanding of quadratic relations; investigate situations involving exponential growth; solve problems involving compound interest; solve financial problems connected with vehicle ownership; develop their ability to reason by collecting, analysing, and evaluating data involving one variable; connect probability and statistics; and solve problems in geometry and trigonometry. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Overall Course Expectations

By the end of this course, students will:

Mathematical Models
1. make connections between the numeric, graphical, and algebraic representations of quadratic relations, and use the connections to solve problems;
2. demonstrate an understanding of exponents, and make connections between the numeric, graphical, and algebraic representations of exponential relations;
3. describe and represent exponential relations, and solve problems involving exponential relations arising from real-world applications.

Personal Finance
1. compare simple and compound interest, relate compound interest to exponential growth, and solve problems involving compound interest;
2. compare services available from financial institutions, and solve problems involving the cost of making purchases on credit;
3. interpret information about owning and operating a vehicle, and solve problems involving the associated costs.

Geometry and Trigonometry
1. represent, in a variety of ways, two-dimensional shapes and three-dimensional figures arising from real-world applications, and solve design problems;
2. solve problems involving trigonometry in acute triangles using the sine law and the cosine law, including problems arising from real-world applications.

Data Management
1. solve problems involving one-variable data by collecting, organizing, analysing, and evaluating data;
2. determine and represent probability, and identify and interpret its applications.

ASSESSMENT BREAKDOWN INCLUDING CATEGORIES AND WEIGHTINGS.

Formative assessments are learning practices that provide important feedback to student progress and include homework checks, exit tickets, self assessments to name a few.

Summative assessments form the foundation for final mark allocation at the end of a unit, term and exam.

CATEGORIES	% WEIGHT OF FINAL GRADE
Knowledge	30
Application	20
Thinking	10
Communication	10
Final Examination	30
TOTAL	**100**

Unit	Unit Breakdown	Assessments
Trigonometry	Topics include: Pythagorean's Theorem, Primary Trigonometry Ratios, Sine Law, Cosine Law, Applications of Trigonometry.	Unit quizzes and/or tests.
Probability	Topics include: Intro to probability, comparing experimental to Theoretical Probability, interpreting stats from media.	Unit quizzes and/or tests.
One Variable Statistics	Topics include: One variable data, sampling types and techniques, measures of central tendencies, measures of central tendency and measures of spread	Unit quizzes and/or tests.
Quadratics Relations I	Topics include The parabola, vertex, graphing a parabola, vertex form of the quadratic relation.	Unit quizzes and/or tests
Quadratic Relations II	Topics include: Binomial Multiplication, standard form of quadratic relations, factoring quadratics, intercept (factored) form of quadratic relations ,problem solving with quadratics	Unit quizzes and/or tests.
Geometry in Design	Topics include: golden ratio, golden rectangle; isometric perspective drawing and orthographic projections; nets, scale models	Unit quizzes and/or tests.
Exponential Relations	Topics include: negative and zero exponents, exponential rules, Applications of Exponential Relations- growth and decay	Unit quizzes and/or tests.
Personal Finance	Topics include: simple and compound interest, present value, future value; savings, investment, costs of credit cards, vehicles-buying or leasing?, cost of operating a vehicle	Unit quizzes and/or tests.

LEARNING SKILLS Learning Skills will be reported on the student's report card. The following chart indicates the skills and look-fors for each student.

WORKS INDEPENDENTLY	TEAMWORK	ORGANIZATION	WORK HABITS/HOMEWORK	INITIATIVE	SELF-REGULATION
The student: - accomplishes tasks independently - accepts responsibility for accomplishing tasks - follows instructions - regularly completes assignments on time and with care - uses time effectively	The student: - works willingly and cooperatively with others - listens attentively, without interrupting - takes responsibility for his/her share of the work to be done - helps to motivate others, encouraging them to participate - shows respect for the ideas and opinions of others	The student: - organizes work when faced with a number of tasks - devises and follows a coherent plan to complete a task - demonstrates ability to organize and manage information - follows an effective process for inquiry and research	The student: - completes homework on time and with care - follows directions - shows attention to detail - perseveres with complex projects that require sustained effort - applies effective study practices	The student: - seeks out new opportunities for learning - seeks necessary and additional information - requires little prompting to complete a task, - approaches new learning situations with confidence and a positive attitude - seeks assistance when needed	The student: - sets individual goals and monitors own progress - seeks clarification or assistance when needed - reflects and assesses critically own strengths, needs and interests - perseveres and makes an effort when responding to challenges

Additional Information:
- Students are reminded to have a scientific calculator, graphing paper and other appropriate materials for the course.
- Additional help is available through your teacher.
- Access to the Ontario Educational Resource Bank (OERB) is at http://resources.elearningontario.ca/
  The login for use by the Peel District School Board's students is
  > Student Login: pdsbstudent
  > Student Password: oerbs
- Visit http://www.khanacademy.org/ for mini lessons on topics covered in class.
- Mathematics Contests for students in Grade 11:
  - Fermat Contest: register during the first week in January; contest written in February
  - Hypatia Contest : register during the first week in March; contest written in April.
    Visit www.cemc.uwaterloo.ca for additional details.

Clarkson S.S. Assessment & Evaluation Policy

CHEATING:
Students are expected to demonstrate **HONESTY** and integrity and submit assessments that are reflective of their own work. Cheating is defined as completing an assessment in a dishonest way through improper access to the answers. Examples include, but are not limited to; using another student's work as your own, using an unauthorized reference sheet during an assessment, receiving / sending an electronic message to another student with test questions / answers, etc.

In order to ensure that all assessments are free from cheating,

Students will:
- review school policy with regards to academic honesty   - submit their own work for evaluation to show evidence of skill and knowledge   - use only teacher approved materials during an evaluation   - demonstrate the qualities of good character and good intention (honesty, caring, respectful, responsibility,) when preparing evidence of their learning.

If a student cheats on an assessment,

Students may be:
- required to complete an alternate evaluation under direct supervision in a timely manner   - required to write a reflective piece which demonstrates an understanding of the character attribute of honesty.   - assigned a mark deduction   - referred to a vice-principal   - assigned a zero.

Plagiarism:

Students are expected to demonstrate **HONESTY** and use proper citations and referencing when completing assessments. Plagiarism is defined as the unauthorized use or close imitation of the language and thoughts of another author and the representation of them as one's own original work. Examples include, but are not limited to; copying another's project (portions or whole) and paraphrasing parts of a book or article without reference or citation.

In order to ensure that all assessments are free from plagiarism,

Students will:
- Be required to complete a workshop in correct documentation   - produce their own work   - give credit through appropriate citations and referencing when quoting or paraphrasing the work of others   - be diligent in maintaining and protecting their own work   - seek clarification or assistance from teachers or other available resources

If an assessment is plagiarized,

Students may be:
- required to rewrite or resubmit all or parts of the assignment   - referred for remedial lessons on proper citation and references   - required to do a reflection on the character attribute of honesty   - referred to a vice-principal   - required to sign a contract with the administration and teacher about commitment to academic honesty   - assigned a zero.

LATE ASSIGNMENTS – assignments submitted after the due date and before the absolute deadline.

Students are expected to demonstrate **RESPONSIBILITY** and submit all assessments by the established due date. Students are responsible for providing evidence of their achievement of the overall course expectations within the time frame specified by the teacher and in a form approved by the teacher. There are consequences for not completing assignments for evaluation or for submitting those assignments late.

In order to ensure that all evaluations are submitted by the established due date,

Students will:
- record due dates in personal organizers   - consider other commitments including co-curricular activities in planning assignment completion   - negotiate alternate due date well before due date, not last minute (a minimum of 24 hours in advance or at teachers discretion)   - find out what they missed during absences   - use school support systems (i.e. special education, counselors, extra help, …)

If an evaluation is submitted **after** the due date

Students :
- must notify the teacher and explain why the assignment was not submitted on the due date – in grades 9 & 10 a note from a parent/guardian may be required   - marks may be deducted for late assignments   - may be required to complete the assignment with supervision   - may be referred to a school based support team or a vice-principal   - may be placed on a contract for assignment completion

MISSED ASSIGNMENTS – **assignments either not submitted or submitted after the absolute deadline**

        Excerpt from Policy 14.

In order to ensure that all evaluations are submitted,

Students will:
- be responsible for meeting and knowing absolute deadlines for missed assignments   - use personal organizers to manage time and meet deadlines   - be responsible for maintaining on- going communication with their teacher   - take responsibility for missed work during all absences .

If an evaluation is submitted **after** the **absolute** deadline,

Students:
- must notify the teacher and explain why the assignment was not submitted   - students may be asked to provide a note from a parent/guardian   - may be required to complete the assignment or an alternate assignment under supervision   - may be referred to a school based support team or a vice-principal   - may be placed on a contract for assignment completion   - may be involved in an action plan to complete the required assignment within a given time frame   - may be assigned a zero.

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Parent/Guardian Signature   **Student Signature**   **Date**