Enriched Foundations 20 Course Outline Spring 2020

Campbell Collegiate   102 Massey Road   (306)523-3250   www.campbell.rbe.sk.ca

Course Description

Foundations of Mathematics 20 is a continuation of Foundation and Pre-Calculus 10. This course is considered an enriched course to help prepare students who plan on taking Advanced Placement Calculus and will therefore have a focus on critical and creative thinking as it applies to Mathematics. Students will be challenged in this course to extend understandings of concepts beyond application and into analysis, synthesis and evaluation. The pace of this course will be rigorous and using class time provided imperative for success.

Instructor's Contact Information:

Mrs. Joni Sundeen   **Email:** joni.sundeen@rbe.sk.ca   **Rm 217**

Website: Students are encouraged to visit the following website for class information, extra help, math videos & supplementary materials:
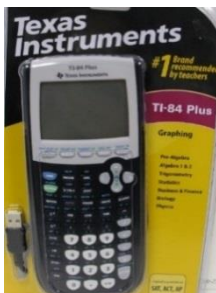
Website: https://sundeenmath.weebly.com

Pre-requisite: Foundations and Pre- Calculus 10   **Textbook:** Foundations of Mathematics 11 by Nelson

Materials Needed:
- 3 coil graph notebook
- 3 ring binder with looseleaf
- Geometry set
- Pencils and Erasers
- Colored Pens (Erasable pens are encouraged)
- Ruler
- Scientific Calculator (Approved styles only)
  CALCULATORS WITH THE FOLLOWING FEATURES WILL NOT BE ALLOWED**: WriteView, Mathprint, Multiview, Natural Display or Textbook Display**
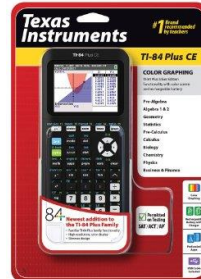- Graphing Calculator **(Optional)** You need to have a Texas Instrument Graphing Calculator in order to complete various Pre-AP portions of this course (and for each subsequent Pre-AP and AP Math course). The AP final exam in grade 12 is written using the graphing calculator for half the test and no access to any calculator for the other half.

- Below are photos of some of the types and varieties that will meet the needs of the students.

TI-84 Plus
Regular black or Silver Case
This calculator has a black and white screen and uses replaceable batteries

TI-84 Plus C
The case comes in various colours
This Calculator has a coloured screen and a rechargeable battery

TI-84 Plus CE
The case comes in various colours
This Calculator has a coloured screen and a rechargeable battery
It is thinner and lighter than the previous two models

Outcome for Topic 1 - Chapter 6:
- **FP20.8:** Demonstrate understanding of systems of linear inequalities in two variables.

Outcome for Topic 2 - Chapter 7:
- **FP20.9:** Demonstrate an understanding of the characteristics of quadratic functions of the form $y = a(x - p)^2 + q$, including: vertex, intercepts, domain and range, axis of symmetry.

Outcome for Topic 3 - Chapter 1:
- **FP20.2:** Demonstrate understanding of inductive and deductive reasoning including: analyzing conjectures, analyzing spatial puzzles and games, providing conjectures, solving problems.

Outcome for Topic 4 - Chapter 2:
- **FP20.4:** Demonstrate understanding of properties of angles and triangles including: deriving proofs based on theorems and postulates about congruent triangles, solving problems.

Outcome for Topic 5 - Chapter 3 & 4:
- **FP20.5:** Demonstrate understanding of the cosine law and sine law (including the ambiguous case)

Outcome for Topic 6 - Chapter 5:
- **FP20.6:** Demonstrate an understanding of normal distribution, including standard deviation and z-scores.
- **FP20.7:** Demonstrate understanding of the interpretation of statistical data, including: confidence intervals, confidence levels, margin of error.

Outcome for Topic 7- Chapter 8 (PROJECT):
- **FP20.3**: Expand and demonstrate understanding of proportional reasoning related to: rates, scale diagrams, scale factor, area, surface area, volume.

Assessment and Evaluation:

Daily Homework Assignments (Formative)	0%
Assignments	10%
Project	5%
Concept Checks	50%
Comprehensive Test #1 (Ch 6, 7 & 1)	10%
Comprehensive Test #2 (Ch 2,3,4 & 5)	10%
Final Exam	15%
TOTAL	100%

CONCEPT CHECKS
- The course is broken down into 29 concepts (the list of concepts is available on the website you will also be given a paper copy). Approximately once a week you will have a quiz on a selection of concepts. This quiz is called a Concept Check.
- Each concept on the quiz is tested using an appropriate number of questions that covers all aspects of the concept. Each concept is marked on a four point rubric (shown on NEXT PAGE).

- The Concept Check Quizzes contain the Foundational material that is necessary to be successful in this class AND in subsequent math classes. We place high value on students understanding these concepts fully and retaining this knowledge. With this in mind, there will always be two in class opportunities to assess each outcome in a Concept Check.

2nd ATTEMPTS FOR CONCEPTS:

- Concept Check #1 will test Concepts 1-4. After writing this Concept Check you will receive a mark for each concept out of 4. Concept Check #2 will test concepts 1-4 again and will test concepts 5-7 for the first time. We want you to learn from your mistakes so we give you the second try in order to clear up any problems you had the first time you wrote your quiz. We want you to be able to retain and truly understand the concept rather than memorizing. This means that we will always count your second mark on each concept as the summative mark.
NOTE:

Individual Concept Score	Explanation of Mark The student:
4	...is an expert, shows all necessary steps in an organized and meaningful way with no errors, may show more than one method, gives excellent explanations to show understanding, gives correct answers in the correct form (simplified, rounded, correct unit, etc.)
3.75	...makes recording errors (Ex: Forgets negative sign, rounds incorrectly, writes the incorrect unit, etc.)
3.5	...makes a minor mistake, is CLOSE to getting the correct solutions (Ex: Calculation error).
3	...understands the concept quite well, shows necessary steps of the work, gives good explanations to show understanding, usually gives answers in the correct form (simplified, rounded, correct unit, etc.) and makes more than one minor mistake or a significant error not related to the concept.
2-2.5	...shows progress in this concept but is misguided in their understanding and still needs help and practice, shows understanding of some steps of the work, can explain some of the answer but the solution process is substantially different from the correct one, still makes several errors in the steps and does not always put the answer in the correct form (simplified, rounded, correct unit, etc.).
1-1.5	...is just beginning to understand this concept or is confusing this concept with another, still needs a lot of help and practice, does not understand how to do the steps of the work without help and cannot explain how to find the answer without help, makes a lot of mistakes and/or the work is incomplete.
0	...does not demonstrate any comprehension of this concept, writes nothing on the page or writes something completely unrelated to the concept.

- If time permits, we may offer an out of class third attempt at concepts if appropriate.
- Concept checks make up 50% of the course. In order to be a successful student it is imperative that the skills in these concepts are thoroughly understood and mastered during this course, thus the rationale for allowing for redo's for 50% of the assessments.

COMPREHENSIVE TESTS

- Rather than Unit Tests, there will be two Comprehensive Tests during the semester. The Comprehensive Tests will focus on applying the skills learned in Concept Check Quizzes. Each Comprehensive Test will be worth 10%

EXTENSION PROBLEMS, ASSIGNMENTS, JOURNALS & PROJECTS

- There will be a few take home Extension Problem Assignments, assignments, journals or projects that correlate with the concepts learned in this course. There will be an increased focus on proper mathematical and algebraic procedure and setup along with an expectation of detailed written explanation of the steps and solution.

Mrs. Sundeen's Expectations

- ❖ Be on time. Be prepared. Do your work. Respect yourself and others.
- ❖ The use of inappropriate cell phones is NOT allowed in the classroom. Keep your phone in your backpack turned off, locker or keep in the designated cellphone hotel slot during class. DO NOT set it on your desk. If seen using improperly the device will be confiscated.
- ❖ If a student is absent from class, he/she is expected to check with a classmate, the website or email Mrs. Sundeen and complete the work assigned that day.
- ❖ If a student is absent on the day of an assessment and prior arrangements are not made with me, then the assessment will be written in class on the day of return.
- ❖ This is a difficult course and practice will be a key asset to your success. Any homework questions that are not completed during class time must be completed at home. Homework will be checked for completeness.

Student/Parent Communication

You, as a Regina Public Schools student, have access to your grades online, through a link on the Campbell Collegiate website. Your login information is the same as the login information you use to log onto the school computers. This access is to help you monitor your attendance as well as assignments that may be outstanding. Parent Portal is a tool that helps parents achieve the same goal. The parent login information is available in the main office. Parents can sign up for REMIND as well, to be informed of HW, quizzes and exams. If you have questions or concerns please e-mail Mrs. Sundeen.
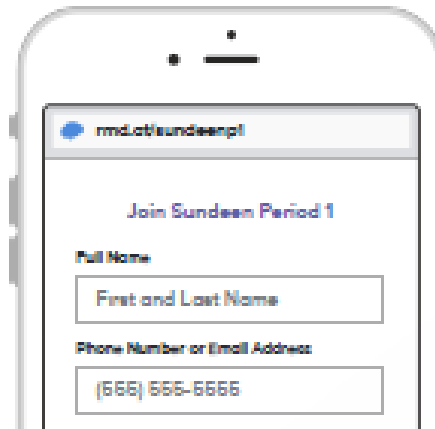
SIGN UP FOR IMPORTANT UPDATES THROUGH REMIND

A If you have a smartphone, get push notifications.

On your iPhone or Android phone, open your web browser and go to the following link:
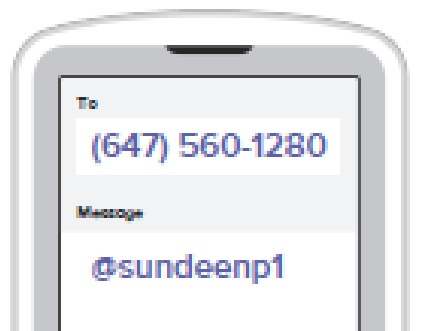
rmd.at/sundeenp1

Follow the instructions to sign up for Remind. You'll be prompted to download the mobile app.

rmd.at/sundeenp1

Join Sundeen Period 1

Full Name

First and Last Name

Phone Number or Email Address

(555) 555-5555

Students PLEASE USE YOUR ACTUAL NAME to sign up for remind.

NOTE: Parents/Guardians may also choose to sign up with my remind. If you choose to sign up as a parent, please include both your name and the name of the students' in your personal details. It helps me keep track of my communications!

B If you don't have a smartphone, get text notifications.

Text the message @sundeenp1 to the number (647) 560-1280.

* Standard text message rates apply.

To

(647) 560-1280

Message

@sundeenp1

PARENTS/GUARDIANS: Please read over the previous pages and fill in the following page. Only the following page is to be returned to me, the previous pages should be kept by the student and put in their binder.

<u>ENRICHED Foundations of Math 20 Parent/Guardian Form 2019/2020</u>

I, _____ (please print) (student's parent/guardian), have read Mrs.

Sundeen's **Foundations of Math 20** course outline . I understand

that_____ (student's name) is responsible for adhering to the

expectations and policies outlined in the course outline.

If I have any questions regarding the course outline or the class, I understand that contact information has been

provided above and is also available on the Campbell Collegiate website.

I understand that all attendance information, assignment information, and grades are available through the

Parent and Student Portals.

If Mrs. Sundeen has questions about your son/daughters grades/behavior or just want to brag about their

excellent work, she should contact (Please PRINT):

My contact information is:

Name(s): _____

*Phone Number(s):*_____

Email Address(es): _____

I prefer: (Circle the correct one)

(daytime   or   evening)

(email   or   phone)

Thank you very much for your understanding and participating in your child's Foundations

20 class! This will be a successful year with your support!

Mrs. J Sundeen