

Course: Foundations of Mathematics and Pre-Calculus 10

Teachers: Graeme Barber, Sean Henry, Cody Miller, and Alex Kelsch

Contact information: gbarber@sd44.ca, shenry@sd44.ca, codymiller@sd44.ca, and akelsch@sd44.ca

Course Description:

Mathematics 10 Foundations and Pre-Calculus is a course that prepares students to become numerate. This pathway is designed to provide students with the mathematical understandings and critical thinking skills identified for entry into post-secondary programs. A big idea in this course is that representing and analyzing situations allows us to notice and wonder about relationships. Through inquiry into the concepts of relationships and communication, this course will assist students to develop the ability to conjecture, reason logically, employ quantitative and spatial information, and apply a variety of mathematical methods to solve problems and make decisions confidently and independently.

Summer Learning Beliefs:

Summer Learning provides an engaging learning environment where all students can challenge themselves academically and fulfill their learning goals. To ensure this, students will:

- abide by the student Code of Conduct
- adhere to the Academic Honesty policy
- adhere to the *Summer Learning* Student Engagement policy
- respect themselves and others
- attend every class and be punctual
- inquire, think, and participate to the best of their ability
- access technology in class when instructed to do so and for learning purposes only
- challenge themselves and have fun learning

All Summer Learning policies can be accessed at:

<https://www.sd44.ca/school/summer/policies/Pages/default>.

Learning Plan:

	Evidence of Learning (Assessment)	Learning Plan
80%	<ul style="list-style-type: none"> chapter test and quizzes inquiry-based assignments log and track their math practice in a Math Journal inquiry-based assignments Pecha Kucha presentation 	<p><i>What the students will know:</i></p> <ul style="list-style-type: none"> systems of linear equations primary trigonometric ratios financial literacy: gross and net pay linear functions: slope and equations of lines polynomial factoring <hr/> <p><i>What the students will do:</i></p> <ul style="list-style-type: none"> Explore, analyze, and apply mathematical ideas using reason, technology, and other tools. Develop, demonstrate, and apply mathematical understanding through play, story, inquiry, and problem solving. Represent mathematical ideas in concrete, pictorial, and symbolic forms. Reflect on mathematical thinking. Use mistakes as opportunities to advance learning. <hr/> <p><i>What the students will understand:</i></p> <ul style="list-style-type: none"> Representing and analyzing situations allows us to notice and wonder about relationships. Algebra allows us to generalize relationships through abstract thinking.
20%	School Based Summative Assessment	Students will complete a Final Exam which will assess their learning in the entire course.
100%		

Grade Boundaries:

An “A” student is able to:

- Demonstrate and apply the curricular competencies.
- Analyze the information and synthesize the correct solution.

- Discern challenging patterns.
- Apply the concepts and extrapolate onto contextualized situations.
- Superb command of numeracy (no computational error).
- Challenge problems in familiar and unfamiliar situation.

A “B” student is able to:

- Demonstrates and sometimes apply the curricular competencies.
- Analyze the information and synthesize the solution.
- Identify the complex patterns within the context.
- Apply the concepts and able to understand some details in contextualized situations.
- Good command of numeracy.
- Challenge problems in familiar and working towards unfamiliar situations.

A “C” student is able to:

- Demonstrate the curricular competencies.
- Organize the information and attempt to interpret the solution.
- Identify the patterns within the context.
- Build on the concepts and still working on finding the details in contextualized situations.
- Solve routine two-step problems.

Celebration of Learning:

The 2018 Celebration of Learning is shaped around “Ways of Knowing”. Students will be exploring language, reason, intuition, imagination, and memory to explore Ways of Knowing through a mathematical lens. The ideas derived from the exploration of their current Summer Learning experience and previous math courses will form the foundation of a collaborative Pecha Kucha presentation which portrays these five “Ways of Knowing.”

A Pecha Kucha presentation uses imagery and spoken word. Each student is responsible for preparing 3 slides of images and 30 seconds of spoken content about the ways in which we know.

Resources:

Resources
<ul style="list-style-type: none"> • <i>Mathematics 10</i>, published by McGraw-Hill Ryerson
<ul style="list-style-type: none"> • https://sites.google.com/site/seanhenryhelp/