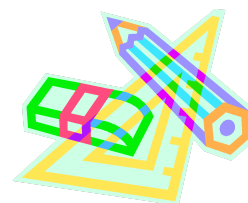


# MATHEMATICS 20-3 COURSE OUTLINE



**Teacher: Mr. S McConnell**

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Mathematics -3 is designed for students who want to learn the mathematics needed to enter most trades or intend to enter the workforce after high school. Math 20-3 will build upon the concepts from Math 10-3. Students will further their knowledge and skills in the area of measurement, geometry, number, and algebra. As well, they will explore statistics through various graphing techniques. Problem solving, reasoning and connections are vital to increasing mathematical power and will be integrated throughout the course. Throughout this course, students are encouraged to think critically and creatively, to use the language of mathematics, to demonstrate good number sense, and to understand the relevancy and application of mathematics to problem solving.

## **Program Goals for Math 20-3**

- Develop spatial sense through direct and indirect measurement.
- Develop number sense and critical thinking skills.
- Develop algebraic reasoning.
- Develop statistical reasoning.

## **Planning Ahead**

Most apprenticeship training programs in Alberta will recommend students successfully complete Mathematics 30-3. However, a small number of apprenticeship training programs may require students to complete the -2 course sequence in order to meet the mathematics entrance level competencies for those trades.

For further information regarding post-secondary entrance requirements:

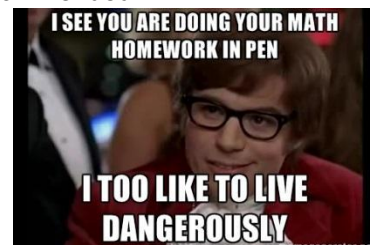
<http://alis.alberta.ca/ec/ep/aas/ta/mathreq.html>

## **Student Materials:**

In order for students to be successful, they must have the proper materials.

For Math 20-3, the following is required:

- Yourself – You need to be in class every day ready to **think, share, and learn**
- A positive attitude – **I can, I will, I am able to!**
- Binder with two dividers and abundant lined loose-leaf paper
- Pencils, Pens, Erasers & Straight Edge. Coloured pencils are recommended.
- Scientific Calculator (with sin/cos/tan function)



*Mathematics 20-3***Program Timeline (Tentative)**

<b><u>UNIT 1: Puzzled by Numbers</u></b> <i>(includes solving and designing puzzles that involve numerical reasoning)</i>	(3 classes)
<b><u>UNIT 2: Slopes 'n' Lines</u></b> <i>(includes proportional reasoning/unit analysis, slope/rate of change, line graphs)</i>	(13 classes)
<b><u>UNIT 3: All Scaled Up!</u></b> <i>(includes 3-D objects and views, exploded views, component parts and scale diagrams)</i>	(17 classes)
<b><u>UNIT 4: The World in 3-D</u></b> <i>(includes surface area and volume)</i>	(13 classes)
<b>CUMULATIVE REVIEW &amp; EXAM</b>	(3 classes)
<b><u>UNIT 5: Money Matters</u></b> <i>(includes bar graphs, histograms, financial services, simple &amp; compound interest, credit options, circle graphs, budgets, analyzing graphs)</i>	(20 classes)
<b><u>UNIT 6: Trigonometry</u></b> <i>(includes right triangles, trigonometry, slope/rate of change)</i>	(8 classes)
<b>FINAL REVIEW and EXAM</b> <i>(reviewing and re-visiting all outcomes)</i>	(4 classes)

\*\*\* Analyzing number puzzles and the solving and manipulating of formulas will be incorporated throughout all units.

**EVALUATION:**

The following categories will be used to evaluate student progress and achievement throughout the course:

**TERM MARK:**

Daily Work, Homework Checks & Check Ups	0%
Summative Assignments	25%
“Game Day” Quizzes (Weekly Quizzes)	25%
Unit Exams, Cumulative Exams & Projects	25%
Final Exam	25%

Summative assignments include mini-projects, reviews, and the digital portfolio.

Daily work will consist of problem solving, mental computation, quick questions, and written assignments.

\*\* Students may use their foldables during quizzes and exams (including the final) \*\*

Work must be shown to earn full marks on questions. A correct answer without showing supporting work will only be awarded partial marks. If the answers were already provided to students (ie. answer key), no marks will be awarded. On the other hand, a wrong answer that does include some correct work will also result in partial marks. It pays to show your work.

Demonstrating the correct process is more important than getting the right answer.

It is **my goal** for you to experience success in math. I am here to help you every step of the way. **You** must first want yourself to be successful and believe that you can reach your goal.

The following 4 strategies will help yourself achieve your goal:

- Be an active listener and stay engaged during class
- Complete your work during class time
- Ask questions as you work in class when you don't understand a concept
- Do the assigned work on a daily basis

Note: I will be available to help students outside of class during TAG, Lunch, or after school, within reason, but priority will be given to students who consistently use their class time well and are still needing extra support.

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## CLASSROOM EXPECTATIONS

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- Remember the **3 R's – Respect, Responsibility, & Right Attitude**. The students and teacher are expected to respect themselves, others, and their environment. We are expected to take responsibility for our choices, our words, our actions, and our lack of action. Finally, we are expected to display a positive attitude.
- **Students are expected to be on time and in class at all times**. It is the student's responsibility to catch up on any missed material. If you know you are going to be away, please make arrangements in advance for any missed work. If a student is absent, a parent/guardian should contact the school to notify the office and explain why the student is not in class (unless prior arrangements have been made). Students who frequently arrive without their supplies will be asked to get them and will also be marked late. Repeated tardiness (typically 5 or more lates) may result in a late contract request.
- **Late/Incomplete Assignments:** Students will be given class time to work on assigned work. That which is not completed in class will be considered homework. Students will be expected to submit their assigned work on the assigned due date (often the following day). If not completed, students may be asked to come in at TAG or Lunch. Summative assignments and projects are for marks and students will be expected to come in during TAG or lunch until assigned work is complete. If a student misses their detention and/or a pattern of not completing work becomes apparent, administration will be notified and a parent/guardian call will be made.
- **Students are expected to take responsibility for their progress and achievement.** This includes being prepared for each class with the necessary supplies. If you are having difficulty with a particular concept or section, it is recommended that you request extra help as soon as possible.

- Electronic Devices:** Electronic devices must be put away during class time unless otherwise instructed by the teacher. As stated in the student agenda, it is not the responsibility of the teacher to prove whether a student is using their device inappropriately or not. In such cases, the action in question will be considered a violation of the electronic device policy. Students using electronic devices for non-instructional purposes during class time will be asked to hand the device over to the teacher for the duration of the class for the first offense. For any subsequent offenses, the teacher will turn the device over to the office. **Unless directed by the teacher, there should be no recording (photo and/or video) of the student, classmates, teacher or class in any form.**
- If there is a concern** or you feel an error has been made with regards to your evaluation, please discuss the matter with me. It is important that you understand and are clear on what basis marks are given.
- Other General Classroom Expectations:** Music devices are not permitted unless told otherwise. Water and “non-distracting” foods are allowed, but must be consumed responsibly. Students will not be permitted to leave during class to get food/drinks from their locker or the vending machine.

## DEPARTMENT POLICIES

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### Exams

- It is YOUR responsibility to prepare for all your tests/quizzes.
- If a student is absent for any quizzes/exams, they will be expected to make arrangements with the teacher to write the exam/quiz in a timely manner.
- When students are absent the day of a test, they will be given a different version of the test AND may void their privilege to rewrite that particular test.
- Requests to not write the test on the planned day will not be honoured.
- Tests need to be completed in one sitting and students will be permitted double time.
- Teachers will not help with answering questions while a student is writing a test it is important to study and be prepared for the test on the day of the test.

### Rewrite Policy

- If a student feels that their mark is not reflective of their ability, they will have the opportunity to re-write any unit test at the end of each semester.

However, the following conditions must be met:

- The test will be written outside of class time.
- The re-write mark will become the new mark whether it is higher or lower than the original mark.
- There will be NO rewrites on open book quizzes, cumulative exams, or final exam.

### Academic Dishonesty (as taken from Student Handbook)

- Examples of academic dishonesty include, but are not limited to:
  - Taking someone else's work or ideas and passing them off as one's own including:
    - o copying from another student
    - o copying/downloading from the internet
    - o taking and/or sharing pictures of assessments
  - use of any Artificial Intelligence (A.I.) programs like, but not exclusive to, ChatGPT or Photomath

- anything copied either in whole, in part (even if just brief parts like the main idea or one example or sentence), or in concept. This also includes the rewording of sentences or ideas to make it look like your own work
- Those who allow their work to be copied/share their work are aiding in the process and therefore JUST AS RESPONSIBLE AND LIABLE to be held to the same consequences as the student who handed in the plagiarized work.
- Depending on the severity of the violation, the offending student(s) may suffer any or all of these consequences in consultation with the teacher and/or Administrator's discretion.

Consequences include, but are not limited to:

- Redoing the assignment
- Parent contact
- A mark of zero on work submitted
- Detentions
- Referral to the administrator
- Phone must be handed in to the office - see cell phone procedure

## **CLASSROOM PROCEDURES**

### **Bellwork**

Class may begin with a quick quiz or a checkup. The intention of this is to help you recall previous concepts and improve your understanding.

### **Entering the Classroom**

Enter the room quickly and quietly. Begin working on Bellwork **or** wait in your desk patiently for me to begin the lesson. If you finish the Bellwork early...

- o check over work from previous day.
- o do extra questions.
- o ask questions about homework.
- o or, wait quietly for further instructions.

### **Arriving Late**

A student who is not in the classroom when the second bell rings is considered late. Late students are not to disrupt the class. Enter the room quickly and quietly and find your seat. Too many lates = detention at lunch... & a late contract...

### **End of class**

Class is over when the bell rings. Please do not pack up or leave class until the bell rings to signal class is over. Use your class time wisely... more time spent working during class = more concepts learned = less/no homework in the evenings.

### **Detentions**

Inappropriate behaviour will not be tolerated. Please refer to your agenda. Detentions will be served at lunch time for inappropriate behaviour. If you skip your detention, you will not be allowed in class until you serve it.

### Using the Washroom

The washroom may be used in emergencies. Please try to go before class. If you must use the washroom during class time, please ask at an appropriate time. You are not to go elsewhere (ie. other classrooms, hanging out in the hallway, the office...). If you are found somewhere else during your washroom break, you will lose the privilege of using the washroom during class. Please use the sign in/sign out sheet.

### Assessment In Tray

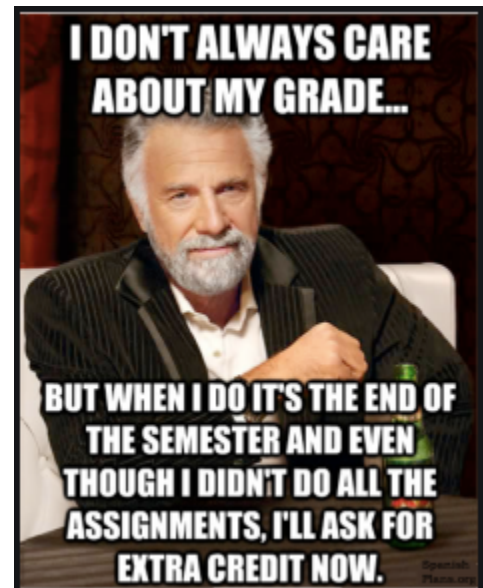
Place any assessments in the Math 20-3 Assessment In tray.

### Assessment Out Tray

If you miss class and need copies of previous handouts or marked work check the Math 20-3 Assessment Out tray.

### Extra Help

I expect you to use your class time wisely – be an active listener, ask questions, take notes, and work on assigned questions during class time. With 75-minute classes, that is a lot of time to work on math. The best time to get help is daily, as you are working on questions in class. Do not wait until the last minute to ask for help! For example, coming in the day before or day of a test and needing help on the entire unit is setting yourself up for failure. TAG is a perfect opportunity to get the help you need. If TAG isn't enough time, talk to me about getting help during another time as well.



### Absences

When possible, let me know ahead of time that you are going to be absent. It is the student's responsibility to catch up on any missed work. If you are absent for a quiz/exam, you will write it **the day following your absence** during TAG, lunch, or after school. Please talk to me to arrange a time.

### Communication

Please talk to me if you have any questions or concerns! You may always find me during the school day to chat (in class, TAG, lunch, before or after school) or you may email me [seanmccconnell@prrd8.ca](mailto:seanmccconnell@prrd8.ca)

**My final piece of advice for a successful semester...**



**Links & Resources**

The following is a list of QR Codes and Links you may find useful for this semester.



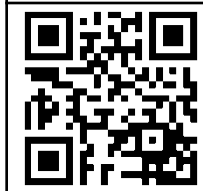
Eagle Butte Website  
<https://eaglebutte.myprps.com/>



MathTV  
(free tutorial videos)  
<http://bit.ly/Ms9TV6>



ExamBank – Math 20-3  
<http://alberta.exambank.com>  
Login: pr.ebhs  
Password: rock



Prairie Rose Website  
<http://www.prrdweb.com/>



Khan Academy (free tutorial videos)  
<https://www.khanacademy.org/>