



# Sturgeon Composite High School

## Mathematics 20-3

### COURSE OUTLINE



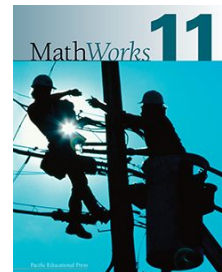
**PREREQUISITE:** *Mathematics 10-3 pass – minimum mark recommended 50%, or  
Mathematics 10C - minimum mark of 40%*

#### **COURSE MATERIALS:**

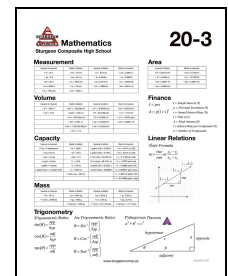
*A Scientific Calculator is required, a Graphing Calculator is not required.  
Three ring binder, Pencil, red pen, 30 cm ruler (contains both metric and imperial),  
white eraser, lined paper, graph paper (0.5cm by 0.5cm), and geometry set.*

#### **TEXT:**

MathWorks 11 (Pacific Educational Press)



Textbook



Formula Sheet

**COURSE CONTENT:** *Mathematics 20-3 consists of 5 units, with each unit being a General Outcome:*

<u>Units</u>	<u>Unit Weighting</u>	<u>Total Time Allotted</u>	<u>Weight Toward Grade</u>
<b>Outcome 1 - Algebra</b>	20%	3.6 weeks	15%
<b>Outcome 2 - Geometry</b>	25%	4.5 weeks	18.75%
<b>Outcome 3 - Measurement</b>	20%	3.6 weeks	15%
<b>Outcome 4 - Number</b>	25%	4.5 weeks	18.75%
<b>Outcome 5 - Statistics</b>	10%	1.8 weeks	7.5%
<b>Final Exam</b>		---	25%

**ASSESSMENT:** *The final mark in Mathematics 20-3 will be based upon the following:*

**FORMATIVE:** 0% of overall mark

*Formative assessment including diagnostic testing is a range of formal and informal assessment procedures conducted by teachers during the learning process in order to modify teaching and learning practices to improve student attainment. This helps students identify their strengths and weaknesses and targets areas that need work.*

**SUMMATIVE WORK:** 75% of overall mark

*Summative assessment evaluates student learning at the end of a single or group of outcomes.*

- Quizzes, Assignments or Other Tasks** (60% in total for all the outcomes of the unit)  
- 60% will be divided equally between all specific outcomes in each unit
- Culminating Exam or Project** (40% of each unit mark)  
- Multiple choice, numerical response, and written response questions on the specific outcomes in the unit or a Project that assesses understanding of the specific outcomes in the unit.

**FINAL EXAM:** 25% of the overall grade is based on the final exam.

**BEHAVIORAL EXPECTATIONS:** As outlined in the Student Agenda and by the individual teacher.

#### **ADDITIONAL RESOURCES:**

Alberta Education "My Child's Learning, a Parent Resource": <http://www.learnalberta.ca/content/mychildslearning/>

Math 20-3 Outcomes with Assessment Standards: <https://education.alberta.ca/media/564036/mathematics-20-3-standards.pdf>

# WHICH CLASS SHOULD I TAKE?

## Mathematics - 1

For students who plan to enter post-secondary programs such as engineering, mathematics, sciences, some business studies, or other programs that require advanced math skills. The sequence is a co-requisite for Mathematics 31 and may be required for post-secondary calculus courses.

## Mathematics - 2

For students wishing to study at the post-secondary level in diverse fields, including arts programs, some engineering and medical technologies (such as nursing), and some apprenticeship programs. This path will fulfill most students' needs. Mathematics-2 is designed with a great deal of flexibility, so that the student can switch sequences in Grade 11 or Grade 12 if his or her interests change.

## Mathematics - 3

For students who want to apprentice to a trade or enter the workforce directly after high school. It is designed to meet the entrance requirements for apprentices in most trades programs.

Please Note:

Mathematics 10C is for students who want to take Mathematics-1 or Mathematics-2, or who just aren't sure yet.

Mathematics 10-4 and 20-4 are the Knowledge and Employability courses that lead to a Certificate of High School Achievement instead of a High School Diploma.

Mathematics 31 is an introductory calculus course. Mathematics 30-1 is a pre-requisite or co-requisite for Mathematics 31.

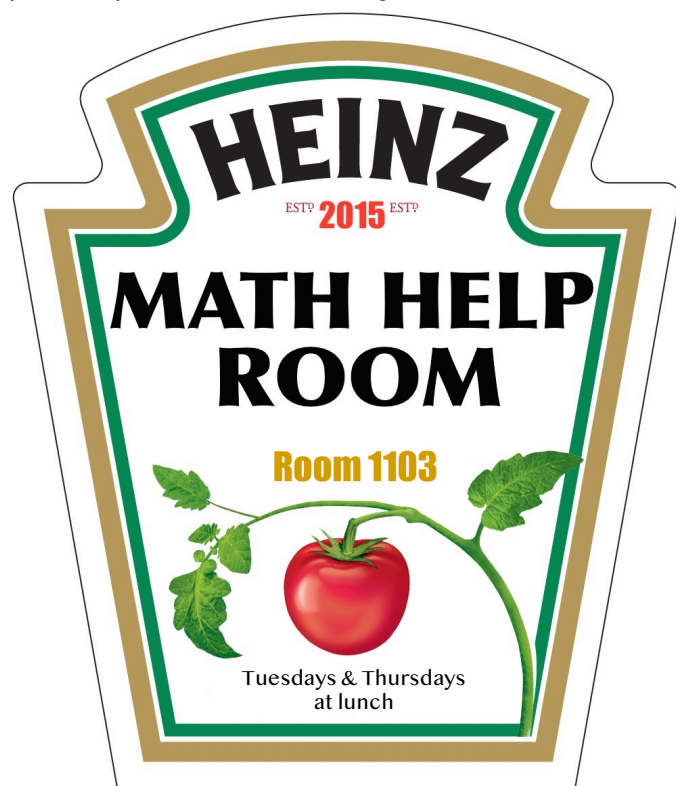
## It's not just about the mark...

Although a passing grade of 50% allows you to proceed to the next course in a sequence, one should also consider what interests them and what they would like to do at the end of high school.

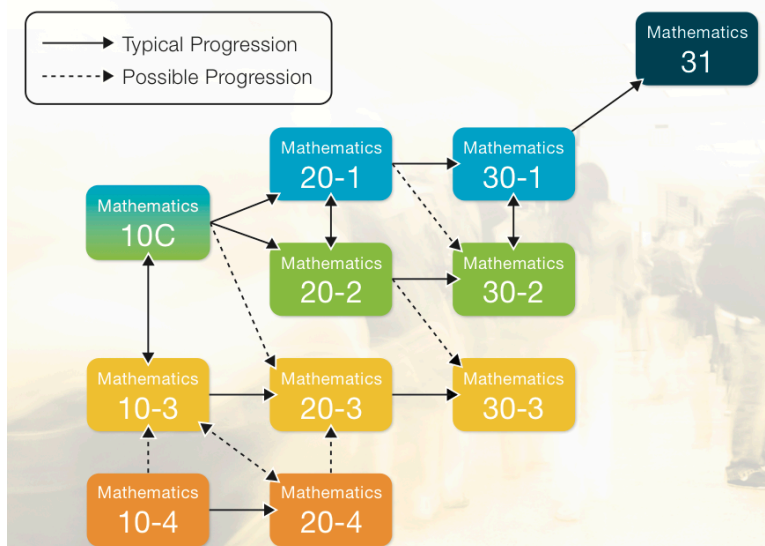
For example students with a grade of at least 50% in Mathematics 10C can take either Mathematics 20-1, 20-2, or 20-3. Their decision will depend on which course would best meet their interests and goals beyond high school. For more information on the courses and course sequences consult the Senior High School Fact Sheets. Similarly, a passing grade of 50% in Mathematics 10C allows you to proceed to Mathematics 20-1 but it does not necessarily mean that you are adequately prepared and have the strong foundational skills to take Mathematics 20-1 and be successful.

## Need A Little Help With Your Work?

The math department sponsors the "Heinz Room" every Tuesday at lunch for individual math help. Come in and **ketchup** if you're behind, before long you will truly be able to **relish** in better grades!



## Progression Through Course Sequences



## What If I Fail A Course? (Retro-Active Credits)

Students not achieving at least 50% in a course may repeat the course or, provided they received at least 40% and with the approval of the school principal, may transfer into a less challenging academic course. Students who successfully complete the next higher-level course in this alternative sequence will be granted credit for the prerequisite course in that alternative sequence.

Possible Routes:

- 40% to 49% in Mathematics 10C and successfully complete Mathematics 20-3 will receive retro-active credits in Mathematics 10-3.
- 40% to 49% in Mathematics 10-3 and successfully complete Mathematics 20-4 will receive retro-active credits in Mathematics 10-4.
- 40% to 49% in Mathematics 20-1 and successfully complete Mathematics 30-2 will receive retro-active credits in Mathematics 20-2.
- 40% to 49% in Mathematics 20-2 and successfully complete Mathematics 30-3 will receive retro-active credits in Mathematics 20-3.

## Do I Need a Graphing Calculator?

Students taking Mathematics 10C, 20-1, 20-2, 30-1 and 30-2 require the enhanced features provided by a graphing calculator.

Students in Mathematics 10-3, 20-3 and 30-3 do not require a graphing calculator. A scientific calculator is sufficient for all concepts covered in the Mathematics - 3 program.

## Approved Graphing Calculators

Casio

- fx 9750 G Plus, fx 9750 GII, fx 9860 GII

Hewlett-Packard

- HPPrime

Sharp

- EL-9900, EL-9600, EL-9600C

Texas Instruments

- TI-83 Plus, TI-84 Plus, TI-84 Plus Silver,
- TI-84 Plus Pocket SE
- TI-84 Plus C Silver, TI-84 Plus CE
- TI-83, TI-83 Plus Silver
- TI-nspire (Touchpad or Clickpad)

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