Rationale:
Pre-Calculus Mathematics 11 is an academic course designed for students whose post-secondary education or training will require theoretical calculus.

Material Covered:
The course is comprised of the following 9 Units:
- Powers
- Trigonometry
- Financial Literacy
- Quadratic Functions
- Quadratic Equations
- Radical Expressions and Equations
- Rational Expressions and Equations
- Systems of Equations
- Linear and Quadratic Inequalities.

Textbook:
The course uses the textbook *Pre-Calculus 11.*   (ISBN-13: 978-0-07-073873-7, McGraw-Hill Ryerson)

Notebook:
Your notebook should be neatly organized, as this will help you study for tests. Label the unit and topic headings clearly at the top of the page. Answer questions fully, so that the information makes sense and can be used later for studying. Show which textbook and which page number the information comes from so you can look it up again easily.

Grading:
This course works on a mastery system. You must pass the mastery tests in each unit to the 80% level before you can go on. In addition, there are cumulative tests from time to time. These are tests you can only take once, so studying before them is essential to do well. Your final class mark for the course is based 60% on the mastery unit tests and 40% on the cumulative tests.

Goal:

The goal of this unit is to review your understanding and increase your skills with powers.

Objectives:

While completing this unit you will investigate the following topics and practice working with

- Writing repeated multiplication as a power
- Zero Exponents
- Exponent Laws, including multiplication and division of powers, powers of powers, powers of products, and powers of quotients

What to Do in this Unit:

- This unit doesn't use the textbook.
- Ask your teacher for the Unit 1 Worksheet, and complete all the work there.

- When you are ready, ask your teacher for the Unit 1 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:

The goal of this unit is to increase your understanding and skills with trigonometry.

Objectives:

While completing this unit you will investigate the following topics and practice working with
- Angles in standard position
- Trigonometric ratios of any angle
- The Sine Law
- The Cosine Law

What to Do in this Unit:

- This unit uses Chapter 2 in the textbook *Pre-Calculus 11.*
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

✓	Chapter	Page	Practice Questions
	2.1	74	p.83 #1-6a, c, 7, 8, 10
	2.2	88	p.96 #1-6a, c, 9a, c, 12, 13
	2.3	100	p.108 #1-8 all
	2.4	114	p.119 #1-2a, c, 3 all, 4a, c, 5-7, 9
	Review	126	Your teacher will assign the review questions if you need more practice.
	Practice Test	129	This practice test will help you decide if you are ready for the Unit Test.

- When you are ready, ask your teacher for the Unit 2 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:

The goal of this unit is to increase your understanding and skills with financial literacy.

Objectives:

While completing this unit you will investigate the following topics and practice working with
- Compound interest.
- Investments
- Loans

What to Do in this Unit:

- This unit doesn't use the textbook.
- Ask your teacher for the Unit 3 Worksheet and do all the work there.

- When you are ready, ask your teacher for the Unit 3 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

- Go over your work from Units 1, 2, and 3 in preparation for Cumulative Test #1. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so do your best.

Goal:

The goal of this unit is to review your understanding and increase your skills with solving and factoring quadratic equations.

Objectives:

While completing this unit you will investigate the following topics and practice working with

- Solutions of quadratic equations
- Factoring quadratic equations
- Solving quadratic equations by completing the square
- The Quadratic Formula

What to Do in this Unit:

- This unit uses Chapter 4 in the textbook *Pre-Calculus 11.*
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

✓	Chapter	Page	Practice Questions
	4.1	206	p.215 #1-4a, c, 6, 7
	4.2	218	p.229 #1-10a, c
	4.3	234	p.240 #1-7a, c, 8, 9
	4.4	244	p.254 #1-5a, c, 7a, c, 8
	Review	258	Your teacher will assign the review questions if you need more practice.
	Practice Test	261	This practice test will help you decide if you are ready for the Unit Test.

- When you are ready, ask your teacher for the Unit 4 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:

The goal of this unit is to increase your understanding and skills with quadratic functions.

Objectives:

While completing this unit you will investigate the following topics and practice working with
- Quadratic functions in vertex form
- Quadratic functions in standard form
- Completing the square

What to Do in this Unit:

- This unit uses Chapter 3 in the textbook *Pre-Calculus 11.*
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

✓	Chapter	Page	Practice Questions
	3.1	142	p.157 #1-4a, c, 5-9 all
	3.2	163	p.174 #1-6 all
	3.3	180	p.192 #1-8a, c
	Review	198	Your teacher will assign the review questions if you need more practice.
	Practice Test	201	This practice test will help you decide if you are ready for the Unit Test.

- When you are ready, ask your teacher for the Unit 5 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

- Go over your work from Units 4 and 5 in preparation for Cumulative Test #2. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so do your best.

Goal:

The goal of this unit is to increase your understanding and skills with radical expressions and equations.

Objectives:

While completing this unit you will investigate the following topics and practice working with
- Working with radicals
- Multiplying and dividing radical expressions
- Radical equations.

What to Do in this Unit:

- This unit uses Chapter 5 in the textbook *Pre-Calculus 11.*
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

✓	Chapter	Page	Practice Questions
	5.1	272	p.278 #1, 2-3a, c, 4, 5-10a, c
	5.2	282	p.289 #1-11a, c
	5.3	294	p.300 #1-4a, c, 6-10a, c
	Review	304	Your teacher will assign the review questions if you need more practice.
	Practice Test	306	This practice test will help you decide if you are ready for the Unit Test.

- When you are ready, ask your teacher for the Unit 6 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:

The goal of this unit is to increase your understanding and skills with rational expressions and equations.

Objectives:

While completing this unit you will investigate the following topics and practice working with

- Rational expressions
- Multiplying and dividing rational expressions
- Adding and subtracting rational expressions
- Rational equations

What to Do in this Unit:

- This unit uses Chapter 2 in the textbook *Pre-Calculus 11.*
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

✓	Chapter	Page	Practice Questions
	6.1	310	p.317 #1-8a, c
	6.2	322	p.327 #1-4a, c, 5, 6, 7a, 8a, 9
	6.3	331	p.336 #1a, c, 4-7a, c
	6.4	341	p.348 #1-3a, c, 5 all, 6a, 8, 9
	Review	352	Your teacher will assign the review questions if you need more practice.
	Practice Test	355	This practice test will help you decide if you are ready for the Unit Test.

- When you are ready, ask your teacher for the Unit 7 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

- Go over your work from Units 6 and 7 in preparation for Cumulative Test #3. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so do your best.

Goal:

The goal of this unit is to increase your understanding and skills with systems of equations and inequalities.

Objectives:

While completing this unit you will investigate the following topics and practice working with
- Solving systems of equations graphically
- Solving systems of equations algebraically

What to Do in this Unit:

- This unit uses Chapter 2 in the textbook *Pre-Calculus 11.*
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

✓	Chapter	Page	Practice Questions
	8.1	424	p.435 #1—3, 4a, c, e, 5a, c, e
	8.2	440	p.451 #1, 2, 3a, c, e, 4a, c, e, 5a, e, 8, 10, 11
	Review	457	Your teacher will assign the review questions if you need more practice.
	Practice Test	459	This practice test will help you decide if you are ready for the Unit Test.

- When you are ready, ask your teacher for the Unit 8 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

Goal:
The goal of this unit is to increase your understanding and skills with linear and quadratic inequalities.

Objectives:
While completing this unit you will investigate the following topics and practice working with
- Linear inequalities in two variables
- Quadratic inequalities in one variable
- Quadratic inequalities in two variables

What to Do in this Unit:
- This unit uses Chapter 9 in the textbook *Pre-Calculus 11.*
- Read and follow the example problems at the beginning of each section, then do the practice problems on the pages in the table below. Be sure to tick off each section as you complete it.

✓	Chapter	Page	Practice Questions
	9.1	464	p.472 #1-5a, c, 8a, c, 9a, c
	9.2	476	p.484 #1-9a, c
	9.3	488	p.496 #1-8a, c
	Review	501	Your teacher will assign the review questions if you need more practice.
	Practice Test	504	This practice test will help you decide if you are ready for the Unit Test.

- When you are ready, ask your teacher for the Unit 9 Test. Remember, you must get 80% to pass, so studying hard is essential to do well.

- Go over your work from Units 8 and 9 in preparation for Cumulative Test #4. When you are ready to write it, ask your teacher. Remember, this test is one chance only, so do your best.

- **Congratulations! You've finished Math 11 Pre-Calculus!**