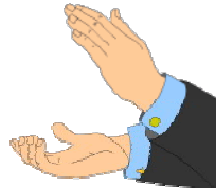


Guess what?

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You're **DONE** the course!



Jun 8-10:56 PM

Unfortunately...

You still have an Exam to write!




Jun 8-10:57 PM

Here's what you learned...

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UNIT 1 - Tools for Operating with Functions






Many skills learned will be used in MHF/MCV4U

-  Exponent Rules, Solving Exponential Equations, Modelling Exponential Relationships
-  Review of Factoring and Operations with Polynomials
-  Simplifying and Operations involving Rational Expressions

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UNIT 2 - Quadratics

Many skills used in this unit are vital for MCV4U - manipulating radicals and optimization (max/min)

-  Simplifying and Operations involving Radicals
-  Properties and Graphing of Quadratics
-  Maximizing/Minimizing Quadratic Functions
-  Solve Quadratic Applications and Model Quadratic Relationships
-  Solving Linear-Quadratic Systems

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UNIT 3 - Transformations of Functions

This is a critical unit for MHF4U.

- Functions vs. Relations, using function notation, introducing the base(parent) functions. Domain and range.
- Transformations of Functions (Translations, Stretches/Compressions, Reflections) -> be able to graph using transformations.
- Inverses of Functions (Graphical and Algebraic manipulation)
- Represent functions in a variety of ways and be able to switch between the representations (*graph, equation, function notation, description of transformations, mapping rule*)

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UNIT 4 - Trigonometry

Newer concepts are critical to MHF/MCV4U - cast rule, special triangles, identities, solving trig equations.

- ★ Review of Right Angled Trigonometry
- ★ Trig Ratios from $0 - 360^\circ$, the Cast Rule, Special Triangles. Find angle(s) given ratio, and find ratio given angle.
- ★ Sine Law (including Ambiguous Case) and Cosine Law
- ★ Trig Identities

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UNIT 5 - Trig Functions

This is essentially Unit 3, but for Trig.

- Periodic Behaviour
- Transformations to $f(x)=\sin x$ and $f(x)=\cos x$
- Modelling Trig Functions (Graphically, Create Equation(s))

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UNIT 6 - Sequences/Series/Pascal




Particularly useful for students taking MDM4U, and certain topics helpful in MCV4U, and first year calculus.

- Arithmetic and Geometric Sequences
- Recursion
- Arithmetic and Geometric Series
- Pascal's Triangle and Binomial Theorem

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UNIT 7 - Finance

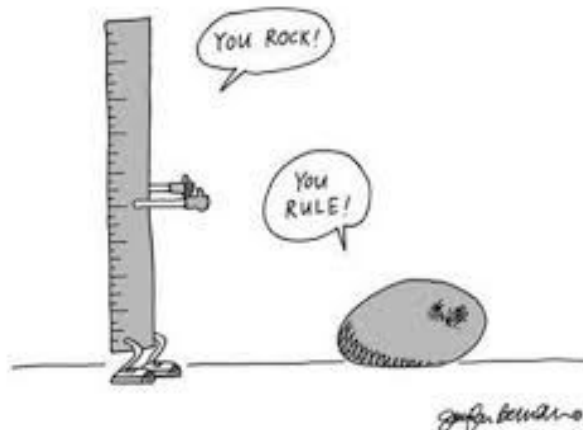
The most useful real-life unit you will ever use, but likely won't study much more of in the future unless you go into Business.

-  Simple Interest
-  Compound Interest/Present Value
-  Annuities (Payment Plans)

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In Summary... You accomplished SO MUCH this term!

This course introduced you to a lot of new material that paves the way for future study. Next year will be filled with revisiting similar topics and building on them. Then there's Calculus.... but I will LIMIT myself from saying anymore.



Jun 8-11:34 PM

Ok.. one last thing...

Exam (30%)

- Full course coverage.
- Addresses all Overall Expectations but not necessarily all specific.
- Multiple Choice and Full Solution.

Review/Study

- Many review handouts posted on website.
- Cumulative review sections in textbook.
- Review your unit quizzes and tests.

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Exam Breakdown

Exam is out of 86 marks:

Part A: Multiple choice (29 questions) - 29 marks

Part B: Show all your work. 16 questions - 52 marks

Communication - 5 marks

Covering all topics (no graphing calculator)

Be sure to look at the exam formula sheet ahead of time.

Jan 13-9:19 AM

MCR 3U Exam Formulae

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\sin \theta = \frac{y}{r} \quad \cos \theta = \frac{x}{r} \quad \tan \theta = \frac{y}{x}$$

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$t_n = a + (n - 1)d$$

$$S_n = \frac{n(a+t_n)}{2} \quad \text{or} \quad S_n = \frac{n}{2}[2a + (n-1)d]$$

$$t_n = ar^{n-1}$$

$$S_n = \frac{a(1-r^n)}{1-r} \quad \text{or} \quad S_n = \frac{a(r^n-1)}{r-1}$$

$$I = Prt \quad A = P(1+i)^n$$

$$PV = A(1+i)^{-n}$$

$$FV = \frac{R[(1+i)^n - 1]}{i}$$

$$PV = \frac{R[1 - (1+i)^{-n}]}{i}$$

Jun 13-7:48 AM