

# HIGH SCHOOL REMOTE LEARNING

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O365 – TEAMS AND CLASS ONENOTE

DENISE GRIGHTMIRE

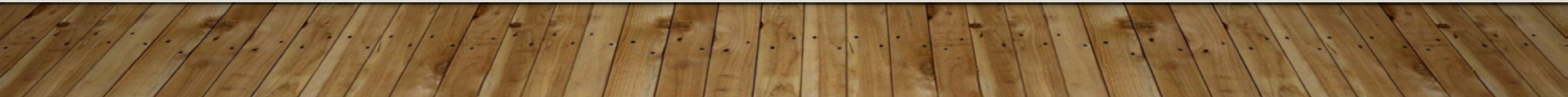
# COURSE DELIVERY

- Grade 10 Applied
  - D2L
  - Challenging clientele
- Calculus and Vectors
  - Teams and Class OneNote
  - Students were using Teams and Class OneNote prior to march break
  - Easy transition
  - Channel created for each unit
    - Announcement created in channel each day to outline assigned work for the day
  - Start with Teams, then shared Class OneNote app – session were recorded through Stream
  - Students posted questions in shared excel file and collaboration
  - Assignments created in Teacher Content then distributed through assignments in Teams
  - Assignments marked in OneNote

# STUDENT ENGAGEMENT

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- D2L
  - Recorded lessons and assigned work
  - Half the class
- Calculus
  - Classes were combined – about 40 students - total of 50 students
  - 3 sessions per week – started the week prior to official week
  - Live tutorials – curve sketching problems –
  - Practiced curve sketching, final lesson prior to break
    - Gave students time to get familiar with teams meeting



# CHANGES IN TEACHING PRACTICE

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- Classroom routine/rules changed but similar – how to behave, etc.
- Check in – get students to talk about how they are feeling – respond to their feelings
- Started with assigning videos from University of Waterloo Courseware
  - Assigned homework related to courseware videos
  - Take up questions the next day
  - Students would use chat to ask/answer questions
- Vectors
  - Live teaching – students wanted live voice
  - After a while – earbuds became strange feeling in the ears
  - Hard to joke when you can't hear anyone – students would help by putting comments in the chat
- Assignments – open ended
  - Learning to have students to submit authentic work
  - Provided an example – students would have to create their own
  - Assignments posted in their OneNote personal section – easy to mark with stylus pen



# ADMINISTRATIVE SUPPORT

- In the beginning – live sessions were not allowed – I had a blind student – special case
- Union didn't want live sessions – given permission by both admin and union
- Principal and VP were added to the classroom
- Both the principal and vp visited the classroom and talked to the students

< All teams



MCV4U P5

General

Culminating

U3 Curve Sketching

U4-5 Derivatives of Trig, Exponential ...

U6 Geometric Vectors

U7 Cartesian Vectors

7 hidden channels

Announcement with learning outline within a channel

After lesson video posted



U7 Cartesian Vectors

Posts Files Notes Word +

Team

Meet



June 3, 2020



Grightmire, Denise 6/3 8:48 AM Edited

## Day 7 - Cartesian Vectors

### Lesson 6 Applications of the Dot Product and the Cross Product

1. Open the completed Lesson 6 Applications of The Dot Product and Cross Product and its Properties (attached) and a copy is in OneNote
2. From CEMC review Vectors in 3 space:
  1. Lesson Part 1-6: <https://courseware.cemc.uwaterloo.ca/11/assignments/55/0>

See more



Lesson 6.pdf  
MCV4U P5 > General



Tutorial Questions.xlsx  
MCV4U P5 > General

← Reply



Grightmire, Denise 6/1 1:42 PM

Scheduled a meeting



Wednesday tutorial  
Wednesday, June 3, 2020 @ 1:00 PM

- Activity
- Chat
- Teams
- Assignments
- Calendar
- Calls
- Files

< All teams



## MCV4U P5

- General
- Culminating
- U3 Curve Sketching
- U4-5 Derivatives of Trig, Exponential ...
- U6 Geometric Vectors
- U7 Cartesian Vectors**
- 7 hidden channels

Extra videos to support learning



## U7 Cartesian Vectors

- Posts
- Files
- Notes
- Word
- +

Team Meet

← Reply



**Grightmire, Denise** 6/3 2:12 PM  
The Right Hand Rule for Torque. To help with today's lesson.



YouTube

### The Right Hand Rule for Torque

Flipping Physics | 33.6K views | one year ago



The right hand rule for the direction of torque is described and demonstrated six times. Want Lecture Notes?  
<https://www.flippingphysics.com/torque-right-hand-r...>  
 YouTube | 05:53

← Reply



OneNote for Windows 10 Denise Grightmire

Home Insert Draw View Help Class Notebook

Segoe UI 20 B I U A A

Heading 1 Dictate

MCV4U P5 Notebook

- Group 2 Notes
- Group 3 Notes
- Group 4 Notes
- Group 5 Notes
- Group 6 Notes
- Group 7 Notes
- Culminating Notes

Content Library

- U7 Cartesian Vectors
- U6 Vector Components
- U4-5 Deriv. of Trig. Exp an...
- U3 Curve Sketching
- U2 Derivatives
- U1 Rates of Change
- Course Intro
- Using the Content Library

Teacher Only

- U7 Cartesian Vectors
- U6 Geometric Vectors
- U4-5 D Trig Exp Log
- U3 Curve Sketching

Unit Assignment #2  
April 6, 2020 9:09 AM

Unit Assignment #2

Unit 3 Assignment

Untitled page

MCV 4U

UNIT 3 – CURVE SKETCHING  
ASSIGNMENT #2

Communication: \_\_\_\_\_/14      Thinking: \_\_\_\_\_/14

**In this assignment you are asked to**

- explain in your own words the algebra behind each step for graphing a function using derivatives
- support each step with your own unique example (textbook and lesson examples are not allowed)
- your example should include at least 1 vertical asymptote, 1 horizontal asymptote, a max or min (Desmos allowed to verify the graph)

**The Steps to sketch the graph of a function using derivatives are:**

- Determine the domain for this function
- Determine the  $x$ - and  $y$ -intercepts for the function.
- Determine the equations of any asymptotes for the function (VA and HA). Identify the behavior around the VA and HA. (only for rational functions)
- Determine the first derivative and use it to identify any critical points and intervals of increase and decrease.
- Determine the second derivative and use it to identify inflection points and intervals of concavity.
- Sketch the function.

The following chart can be used to keep you organized.

Step	Algebra Explanation	Example
1.		



The screenshot shows a Microsoft Teams interface. On the left is a dark blue navigation bar with icons for Activity, Chat, Teams, Assignments, Calendar, Calls, and Files. The main content area is divided into a left sidebar and a main pane. The sidebar shows the team 'MCV4U P5' with a 'General' channel selected. The main pane displays the assignment details for 'Unit 3 Assignment #2', which is due on April 17, 2020, at 4:00 PM. The assignment has 'No points' assigned. The instructions are as follows:

1. Please complete the attached pdf. You do not need to print this document. There is a rubric included in the document
2. After you have completed the assignment take a picture of your work.
3. Copy and paste all pictures or your work into ONE word document. Ensure each picture is the actual size of your work.
4. Save your word document with the following format: lastname\_FirstInitial\_A2 example: Grightmire\_D\_A2
5. Upload your word document here.
6. Select Turn in.

Under 'Reference materials', there is a link to 'UNIT 3 Assignment #2 Rubric.pdf'. The 'Student work' section shows 'None'.

Student view – word option

The screenshot shows a Microsoft Teams interface. On the left is a dark navigation bar with icons for Activity, Chat, Teams, Assignments, Calendar, Calls, and Files. The main content area is titled 'MCV4U P5' and has a 'General' channel selected. At the top of the channel, there are tabs for 'General', 'Posts', 'Files', 'Class Notebook', 'Assignments', 'Grades', and 'Calendar'. The 'Assignments' tab is active, showing an assignment titled 'Unit 4 and 5 Assignment 2' due on April 29, 2020 at 11:59 PM. The assignment has 'No points' assigned. The instructions state: '\*\*\* Remember! Read over this assignment and ask questions during Monday's tutorial session.' followed by a numbered list of five steps: 1. Print or open the PDF, 2. Complete the assignment on a lined sheet of paper, 3. Post pictures of your work either in the attached OneNote page or in a word document, 4. If using a word document submit to this assignment, 5. Turn the assignment in when you are done. Below the instructions, there are sections for 'Reference materials' and 'Student work'. The 'Reference materials' section contains a document icon and the text 'U4\_5\_ExponentialLogarithmicFunctionSummary Ass'. The 'Student work' section contains a document icon and the text 'Unit 4 and 5 Assignment 2 (in Assignments)'.

Student view –  
OneNote or word  
option

## Student list

$3x^2 = 0 \quad e^{3x} = 0 \quad x = -1$  ✓  
 $x = 0 \quad x = -1$  ✓  
 $y = (0)^3(e^{3(0)}) \quad y = (-1)^3(e^{3(-1)})$   
 $y = 0 \rightarrow (0, 0) \quad y = -0.0498 \rightarrow (-1, -0.0498)$

$3xe^{2x} = 0 \quad 3x^2 + 6x + 2$  ✓  
 $x = 0 \quad = \text{Factor} =$   
 $x = -0.42265, -1.5774$

$y'(-2) = - \quad y'(-\frac{1}{2}) = + \quad y'(1) = +$

∴ Yes, there are points of inflection in the function, at  $x = -1.5774, -0.4227, 0$

d.) Confirmed using Desmos. Only the POI at  $x = 0$  is visible the other POIs are not as clear. There is indeed a local minimum at  $x = -1$  if they exist at all

*\* you were supposed to provide the desmos graph and show the points*

Ex. 6 a) Pg. 296 #7

b) An influenza virus is spreading according to the function  $P(t) = 25(4)^{\frac{t}{4}}$ , where  $P$  is the number of people infected after  $t$  days

$P(t) = 50(2)^{\frac{t}{2}} \rightarrow P(t) = 25(4)^{\frac{t}{4}}$  ← my function

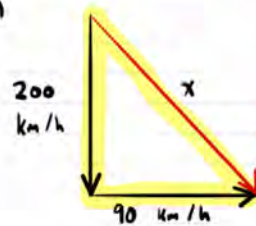


## Unit 6 Geometric Vectors Summary Assignment

Your work is always a pleasure to mark! 😊

A small plane is heading South at 200 km/h. Its altitude is 2500 m (2.5 km).

a)

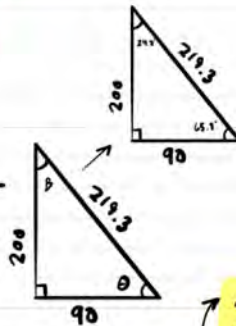


Wind from the west, vector moving east.

→ What is your scale? You must include.

b)  $x^2 = 200^2 + 90^2$

$$x = \sqrt{200^2 + 90^2} \\ = 219.3$$



$$\sin \theta = 200 / 219.3$$

$$\theta = \sin^{-1}(200 / 219.3)$$

$$= 65.8^\circ \quad B = 180 - 90 - 65.8 \\ = 24.2^\circ$$

∴ Ground velocity of plane is approx. 219 km/h in the S24°E direction



# ADVICE FOR HIGH SCHOOL TEACHERS AND UNIVERSITY PROFESSORS

- Rules/routines
- Check in
- Get student feedback through forms – know your students
- Change up the teaching – after a while the same routine is boring
- Extra support?

# PITFALLS ENCOUNTERED

- Teaching students to use software online – some students did not use the software prior to break (some students helped other students)
- Knowing how different the software works iPhone vs Android phones
  - Allow students to help each other
- Assignments – students preferred to submit/post their assignments to Class OneNote
  - Give students an option? – creates more work for person marking
- Gr. 10 applied – pen annotation in D2L not as smooth as OneNote

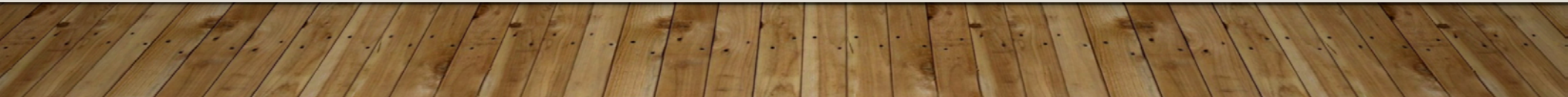
# WHAT DID YOU LEARN ABOUT YOURSELF, COLLEAGUES AND STUDENTS

- Myself
  - Growth Mindset vs Fixed Mindset
- Colleagues
  - Extra support
  - Held weekly meetings and check ins
  - Constant communication – finding support where needed
  - D2L Tests - Created 4 or more questions per Question for a Test – randomized the assessment – if students were together chances of receiving the same question was not always possible
- Students
  - Their love for education
  - Students who struggled were the ones who showed up and asked questions

# SURPRISES ABOUT ONLINE TEACHING

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- Students crave interaction
- Students need to know you care about them
- Students will help each other – learn the software, etc





# WHAT WORKED – WHAT DIDN'T

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- Depends
  - Know your students

# NEW TO THE FALL

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- Bitmoji classroom
- Music while students are waiting
- Breakout rooms – short lessons – more student collaboration
  - OneNote creates a collaboration section when a Channel is created
  - Students can work on problems
- Extra support