

MCV4U: Additional Topics in Calculus

Related Rates

- We did not cover related rates at all this semester.
- Somewhat difficult topic, usually covered after the chain rule and before optimization.
- Here is a lesson this topic with exercises you can try:
<https://courseware.cemc.uwaterloo.ca/11/23/assignments/177/0>

Optimization

- We looked at one lesson in optimization during the school closure. I would normally spend 3 or even 4 classes looking at optimization problems.
- Two online lessons (with exercises) you can try:
<https://courseware.cemc.uwaterloo.ca/11/23/assignments/97/0>
and
<https://courseware.cemc.uwaterloo.ca/11/23/assignments/163/0>

Trigonometry

- In class I normally do a short unit on Trigonometry.
- We can find the derivative of sine, cosine and all other trigonometric ratios. We can also use trigonometric functions to solve related rates and optimization problems.
- This material was taken out of the Ontario MCV4U curriculum a while ago, so it has always been an “extra” topic I’ve found time for.
- This topic is covered in section 5.4 and 5.5 in the green online textbook.
- Two online lessons below as well:
<https://courseware.cemc.uwaterloo.ca/11/24/assignments/193/0>
and
<https://courseware.cemc.uwaterloo.ca/11/24/assignments/194/0>