

**MCV 4U Learning Goals and Success Criteria
Applications of Derivatives (3.1, 3.2, 5.1, 5.2) “Quest”**

Learning Goals	
<p>I will be able to solve problems (including optimization problems) that require the use of derivatives and their properties. (AD2)</p> <p>I will be able to apply derivative rules to polynomial, sinusoidal, exponential, rational, and radical functions to solve problems. (RC3)</p>	
Success Criteria	
<p>I can:</p> <ul style="list-style-type: none"> • Make connections between the concepts of motion and the derivative in a variety of ways. • Make connections between the graphical or algebraic representations of derivatives and real world applications, and solve problems involving these applications. • Apply rules accurately to determine the derivative of a variety of functions, and solve problems involving these derivatives. 	
Assignment Information:	
<p>Your “Quest” will be completed on Wednesday, May 20th. It will be sent to you in an Edsby message at the start of class time (9:45 for period 2, 1:00 for period 4). You will have 75 minutes from the time you receive it to have it back to me. It should only take about 45 minutes, so you have lots of time to check your work. There will be a place to submit it on Edsby. Do not send it back as a message unless you want me to lose it. IF YOU NEED TO MAKE ALTERNATE ARRANGEMENTS YOU NEED TO DO THAT BY TUESDAY, MAY 19th! More details are included below.</p>	
<p>To prepare well for this, you should (in this order):</p> <ul style="list-style-type: none"> • Review your notes and the video lessons and make study notes. We learned new vocabulary and lots of theory, so be sure that you actually understand it! • Review the examples in the notes and be sure that you can do them yourself. You also had that assignment at the start of the unit that you can go over. • Complete questions in the suggested review that you think you need to do. The text book should be your last stop, not your first! 	
What to Expect	<ul style="list-style-type: none"> • Calculate the first and second derivative of four functions. • Determine velocity and acceleration given a position function. • Determine the absolute max and min on an interval for two functions • Explain something about Euler’s number, natural logarithms, and derivatives of exponential functions. • Two word problems with equations provided. (max/min – lots of practice in 3.2)
Text book Questions:	<p>p. 156 #1 – 9, 12, 13, 26, 28, 29</p> <p>p. 263 #1, 2, 5a, 6, 8, 13, 14</p>