

Writing Assignment 3

Due Monday, September 13, 11:59 PM

Now that we're learning about how to compute derivatives, I'd like you to spend some time exploring derivatives in the real world.

Search the internet to see if you can find an application of derivatives that you might find interesting to you. If you're into games, into economics, into animal biology, or human chemistry, or anything—are there certain functions whose derivatives are useful to know?

Spend between 15 to 30 minutes searching and exploring. If after 15 minutes, you have found nothing in your topic of interest, try to find *something* that at least seems like a real-world application of derivatives to you.

Then spend 30 minutes writing about what you found. Cite any sources (just providing relevant links is sufficient).

Here are some questions to ponder as you are writing: Does it make sense that derivatives would be useful in the situations you've found? Why? What do the ideas you've read on the internet have to do with finding slopes of tangent lines? Or with approximating a difference quotient as h approaches zero?

Remember, as usual, I am looking to see your mental explorations. I want to see how you're thinking, and what you're learning.

Warning. The word “derivative” is used in finance and economics to mean something quite different. If you see any use of the word “derivative” to mean some sort of financial security or contract involving a financial asset, you are barking up the wrong tree.

Warning. The word “derivative” is used in chemistry to mean the byproduct of a particular reaction; this is also not the sense in which we use this word in calculus.