Critical Value Calculation algorithms 3/25/21

Ultimate point – Find the max y value of the data points, Collections.max()

Failure point – Find the point at which the force is 0 (may need user input)

Yield point – Take a moving derivative of the data see 1. During the linear part this will be relatively average. Store all these values for later use. When this derivative goes to zero (may need to have some tolerance) then we have hit the yield point.

Young's modulus – After we found the yield point, take the average of all the derivatives from the start to the yield point

1.) https://math.stackexchange.com/questions/2393786/estimating-derivative-and-integral-from-data-table