**USE YOUR OWN PAPER. Just list answers for questions 0 to 000000.**
**YOUR TITLE MUST BE ON EACH SHEET FOR THE WORK TO BE GRADED!**

0.. ###.Firstname.Lastname.T2 _____ M131 T2 (c) fa25, A. Azzolino
00. This is an open book, open notes, calculator & internet use permitted test, BUT, no humans and no artificial intelligence are permitted. By my initials, I swear no one has helped me, I have not used artificial intelligence, & I have helped no one with this test. _____

000.My email address is : _____
0000. Print the test. Write work/answers on the test. Produce a digital copy. Rename it using ###.First.Last.T2 etc. Attach it to email & send to calc@mathnstuff.com
00000. Write your ###.First.Last.T2.p__ on each page OR NOT CREDIT FOR PAGE!!
000000. State the web pages or text pages used on this assignment.

**1. State the definition of the derivative of a function.**

**2. SHOW PENCIL & PAPER COMPUTATION.**
**Compute the derivative by definition for the function**
$f(x) = x^2 - 3x + 1$.

**3. In symbols, write "The derivative of the sum of functions f(x) and g(x) is the sum of the derivatives of f(x) and g(x)."**

**4. In symbols write the quotient rule where the derivative of f(x)/g(x) must be computed.**

**5. Write the equation of a.) the tangent line, and b.) the normal line to the graph of the function**

$f(t) = e^t + 3$ when t is 0

**6. SHOW PENCIL & PAPER COMPUTATION. Compute the derivative.** $y = e^x(\ln(x))$

**7.** Show work, circle answer to: $f(x) = x \sin x$ on $[-1, 1]$
Find **the $x$–values where the graph of the function has a horizontal tangent line.**