TEST 4.1-4.4, 4.6 (Trap Rule), slope fields, Euler’s Method

Are you ready for the test??

1. How do you find the antiderivative (indefinite integral) of a function? Power rules and trig both.
2. How do you solve a differential equation given an initial condition?
3. With projectile motion, how do you find the equations for velocity and position?
   1. How do you find max height?
   2. How do you find the velocity when the object strikes the ground?
4. How do you approximate function values using Euler’s method?
5. How do you approximate definite integral values using Riemann sums (LRAM, RRAM, MRAM) given EITHER a function OR a table of values?
6. How do you approximate definite integral values using the Trapezoidal Rule given EITHER a function OR a table of values?
7. How do you get the value of a definite integral? What do you do if you CAN’T get the antiderivative?
8. Graphically, how do you get the value of a definite integral?
9. Can you apply your properties of definite integrals? Given could you find the following . . .
10. b) c) d)
11. How do you take the derivative of a function defined as an integral? What if the values on the integral are functions and not just x?
12. How do you use the FTC to get new function values? Given the graph of f’(x) and f(3) = 6, how would you find f(-4)? f(7)?
13. Could you describe what a definite integral MEANS in terms of a situation?
14. How do you find the average value of a function? How do you find the c value guaranteed by the MVT for integrals? What is the hypothesis for MVT for Integrals?