

Test #1 will be on Thursday, March 4<sup>th</sup>. The one-hour exam will cover material from Chapters R and 1. Class will be held after the test. Plan to use your graphing calculator. A TI-89 or TI-92 [or any calculator with a computer algebra system] will NOT be permitted.

To be prepared for this test, you should be able to:	Section	Exercises
1. Interpret the graph of a function in applications.	R.1	27, 28, 37, 28
	R.2	65 – 68
2. Use functions/mathematical models to make predictions.	R.1	23 – 26
3. Evaluate functions given graphically or symbolically.	R.2	19 – 24, 51–54
4. Graph piecewise-defined functions.	R.2	55 – 64
5. Determine the domain of a function.	R.3	21 – 54, 59–61
6. Find equilibrium points.	R.5	87 – 94
7. Use the regression features of your graphing calculator to find a regression equation and make predictions.	R.6	12, 13, 21
8. Find the zeros of a function using the ZERO feature of your graphing calculator.	R.5	104 – 112
9. Find points of intersection using the INTERSECT feature of your graphing calculator.	R.5	104 – 112
10. Find limits numerically, graphically, and symbolically.	1.1	all
	1.2	1 – 4, 9 – 26
11. Determine if a function is continuous over an interval or at a point.	1.2	5 – 8, 27 – 62
12. Find and simplify the difference quotient.	1.3	1 – 16
13. Compute and interpret the average rate of change.	1.3	17 – 43
14. Find derivatives using the derivative of the difference quotient.	1.4	1 – 16
15. Find equations of tangent lines.	1.4	17 – 24
	1.5	55, 56
	1.6	97 – 100
16. Determine whether a function is differentiable by using the graph of the function.	1.4	25, 26

17. Calculate the value of the derivative using the appropriate feature of your graphing calculator.	1.4	p.144 #1 – 4
18. Differentiate functions using the Power and Sum-Difference Rules	1.5	1 – 54
19. Find the points on the graph of a function where the tangent line is horizontal.	1.5	57 - 62
20. Find the points on the graph of a function at which the tangent line has a given slope.	1.5	75 – 80
21. Find and interpret the [instantaneous] rate of change.	1.5	81 – 90
	1.6	101 – 111
	1.7	71 – 80
	1.8	55
22. Differentiate functions using the Product & Quotient Rules.	1.6	1 – 47
23. Differentiate using the Extended Power Rule/Chain Rule.	1.7	1 – 38
24. Find derivatives of higher order.	1.8	1 – 44
25. Find velocity and acceleration give a formula for position.	1.8	45 – 50