MTH 131-001 Final Exam Information

Our final exam is scheduled for our last class period on Wednesday, May 8. The final exam will consist of ten 10-point problems (which may have multiple parts). In order to receive full credit for the problems, you must show all work or supply explanations that support your answer.

The final exam will cover the objectives listed below. Focus your studying on these skills.

Final exam skill list

1. Use algebraic techniques to resolve 0/0 indeterminate forms. (Sec 2.3/Lec 5)
2. Determine one-sided and two-sided infinite limits. (Sec 2.2/Lec 8)
3. Use the definition of continuity to determine if a function is continuous at a point. (Sec 2.4/Lec 7)
4. Classify discontinuities. (Sec 2.4/Lec 7)
5. Use the limit definition of derivative to evaluate a derivative. (Sec 3.1-3.2/Lec 11)
6. Evaluate derivatives (and higher-order derivatives) using basic differentiation rules. (Sec 3.3/Lec 12-13)
7. Evaluate derivatives of trigonometric functions. (Sec 3.5/Lec 12-13)
8. Use the chain rule to differentiate compositions of functions. (Sec 3.6/Lec 15)
9. Solve various application problems involving rates of change. (Sec 3.4/Lec 14)
10. Evaluate derivatives involving the inverse trigonometric functions. (Sec 3.7/Lec 17)
11. Compute the derivative of an exponential function of any base. (Sec 3.9/Lec 18)
12. Use logarithmic differentiation. (Sec 3.9/Lec 18)
13. Solve application problems involving related rates. (Section 4.1/Lec 19)
14. Determine the linearization of a function at a point, and use it to approximate function values near the point. (Sec 4.2/Lec 20)
15. Find the absolute extreme values of a continuous function on a closed interval. (Sec 4.3/Lec 22)
16. Use the first derivative test to locate relative extrema. (Sec 4.5/Lec 24)
17. Use the second derivative to find intervals on which the graph of a function is concave up/down. (Sec 4.5/Lec 25)
18. Apply L'Hopital's rule to resolve indeterminate forms. (Sec 4.8/Lec 28)
19. Compute a Riemann sum for a function on an interval. (Sec 5.1/Lec 32)
20. Use the Fundamental Theorem of Calculus to evaluate definite integrals. (Sec 5.3/Lec 34)
21. Use and evaluate definite integrals in applications involving area and average value. (Sec 5.3/Lec 33)
22. Use substitution to evaluate indefinite or definite integrals. (Sec 5.5/Lec 36)