

MAT 161 – CALCULUS I **Written Assignment Guidelines**

I cannot stress enough the importance of working problems in mathematics. It is the best way to learn the subject regardless of the level of mathematics that one is studying. The more problems that you work, the better you will understand the material. Therefore you should not view homework as busy work. It is intended to teach you how to do the problems and are important for instilling a rigor and discipline that is expected of you as a calculus student.

- **All written assignments should be done using pencil.**
- **HOMEWORK IS DUE ON THURSDAY AT CLASS TIME.**
- **You will turn in the assigned problems only.** The core problems are practice problems that will help you to work the assigned (even numbered) problems. I will help you with any core problem and/or may sometimes use them as examples during the lecture. **PLEASE DO NOT SUBMIT THE CORE PROBLEMS.**
- Your name and textbook section are to be written at the top of the first page.
- **Multiple pages must be stapled together. Otherwise you will be penalized points. I am not responsible for lost pages if they are not stapled.**
- Your homework should be done on standard sized 8.5 x 11 inch notebook paper.
- You may write on both sides, but be sure to mark where a new section begins.
- Each problem should be copied down except for lengthy word problems, and worked out.
- Problems should be presented with all intermediate steps written in a clear and legible fashion.

HOMEWORK GRADING GUIDELINES

Each assignment will be worth 15 points distributed as follows:

Four Graded Problems

- (3 points) Steps clearly shown if needed, clear and correct exposition (if a writing assignment), perhaps a very small computational error allowed, but the student demonstrates a clear understanding of the topic at hand.
 - (2 points) Only small errors, such as incorrect or no units with problem. Some steps are unclear or incorrect, but the student appears to have a general idea of how to solve the problem.
 - (1 point) An honest, concerted effort was made to work the problem, however some significant error was made, i.e., wrong method used to solve the problem, significant arithmetic errors, incorrect statement made in exposition.
 - (0 points) Steps used and numbers written appear almost random. You appear to have spent very little to no time attempting the problem. It is clear that the student does not understand many, if any of the concepts needed to solve the problem. Not attempting to work a problem at all.
- **Penalties: Late Turn In: - 3 points (Every day that it is late.); Not written in a clear and legible fashion: - 5 points; Not Stapled: - 2 points**

HOMEWORK PROBLEMS

<u>Section</u>	<u>Problems</u>
1.5: Exponential Functions	core: 7, 15, 17, 19, 21, 29 assigned: 8, 16, 18, 20, 22, 30
1.6: Inverse Functions and Logs	core: 25, 35, 37, 41, 49, 51, 53 assigned: 26, 36, 38, 40, 50, 54
2.2: The Limit of a Function	core: 5, 7, 9, 11, 17, 21, 25, 23, 31 assigned: 4, 6, 8, 12, 18, 22, 26, 25, 32
2.3: Limit Laws	core: 1, 15, 17, 19, 21, 23, 37, 47 assigned: 2, 16, 18, 20, 22, 24, 38, 48
2.5: Continuity	core: 3, 5, 13, 17, 19, 37, 41, 45, 53 assigned: 4, 6, 14, 18, 20, 38, 42, 46, 54
2.6: Limits at Infinity	core: 3, 5, 7, 17, 23, 25, 31 assigned: 4, 6, 8, 18, 24, 26, 32
2.1: Tangent Lines and Velocity	core: 3, 5, 7 assigned: 4, 6, 8
2.7: Derivatives	core: 3, 11, 19, 21, 33, 43 assigned: 4, 12, 20, 22, 34, 44
2.8: Derivative as a Function	core: 1, 3, 7, 9, 13, 27, 37, 43 assigned: 2, 4, 8, 10, 14, 26, 38, 44
3.1: Derivatives of Polynomial and Exponential Functions	core: 3, 13, 23, 29, 35, 47, 51, 54, 65 assigned: 4, 14, 24, 30, 36, 48, 52, 55, 66
3.2: Product and Quotient Rules	core: 3, 13, 33, 43, 47, 49 assigned: 4, 14, 34, 44, 48, 50 (<i>normal means perpendicular</i>)
3.3: Derivatives of Trig. Functions	core: 3, 11, 17, 21, 29, 41, 43, 45 assigned: 4, 12, 18, 22, 30, 42, 44, 46
3.4: The Chain Rule	core: 7, 11, 23, 37, 51, 65, 69 assigned: 8, 12, 24, 38, 52, 66, 68
3.5: Implicit Differentiation	core: 3, 7, 13, 15, 21, 25, 29 assigned: 4, 8, 14, 22, 26, 30

HOMEWORK PROBLEMS (cont'd)

<u>Section</u>	<u>Problems</u>
3.6: Derivatives of Log Functions	core: 5, 7, 13, 21, 27, 33, 41, 45 assigned: 6, 8, 14, 22, 28, 34, 42, 46
3.9: Related Rates	core: 5, 7, 13, 15, 17, 19, 25, 29 assigned: 6, 8, 16, 20, 44, 24, 30
4.1: Max. and Min. Values	core: 5, 7, 11, 27, 31, 37, 51, 59 assigned: 6, 8, 12, 28, 32, 38, 52, 60
4.2: Mean Value Theorem	core: 3, 5, 7, 13, 11, 15 assigned: 4, 6, 8, 14, 12, 16
4.3: Derivatives and Graphs	core: 1, 5, 15, 19, 25, 31, 37, 45 assigned: 2, 6, 16, 26, 32, 38, 46
4.4: L'Hopital's Rule	core: 3, 9, 13, 11, 33, 25, 55, 63 assigned: 4, 10, 14, 12, 34, 24, 56, 64
4.7: Optimization	core: 5, 15, 23, 27, 31, assigned: 6, 16, 24, 28, 32
4.8: Newton's Method	core: 7, 11, 19 assigned: 8, 12, 20
4.9: Antiderivatives	core: 3, 9, 11, 25, 31, 45 assigned: 4, 10, 12, 26, 32, 45
5.2: The Definite Integral	core: 1, 5, 33, 35, 37, 39 assigned: 2, 6, 34, 36, 38, 40
5.3: Fund. Theorem of Calculus	core: 3, 23, 27, 31, 35, 45 assigned: 2, 24, 28, 32, 36, 46
5.5: Substitution	core: 5, 9, 15, 25, 29, 35 assigned: 6, 10, 16, 26, 30, 36