

These problems are a good way to catch up on prerequisite material. I will be assuming, for this class, that all students are conversant and comfortable with the topics covered in these sections. If this does not describe you, you need to brush up on this material as soon as you can. Tutoring resources are available in the syllabus. Other good resources are <http://www.khanacademy.org/> or <http://www.purplemath.com/>.

Paul's Online Notes: <https://tutorial.math.lamar.edu>

Appendix D - Trigonometry: #1, 3, 4, 6, 8, 10, 11, 13, 16, 17, 19, 21, 24, 27, 28, 29, 31, 33, 38, 59, 64, 65, 67, 68, 71, 73, 75, 77, 78, 79, 82

Section 1.1 - Four Ways to Represent a Function: #1-4, 7, 9, 10, 13, 14, 22, 25, 26, 27-30  
(simplify as much as possible), 31, 34, 35, 38, 42, 43, 44, 46, 49, 62-65, 69-72, 73, 76, 77

Section 1.2 - Mathematical Models: A Catalog of Essential Functions: #1, 2, 3, 5, 6, 8, 9, 12, 14, 19, 25

Section 1.3 - New Functions from Old Functions: #1, 2, 3, 5, 6, 7, 9-23 odd, 27, 28, 29, 33-35, 38, 41-45, 49, 51, 52

Section 1.4 - Exponential Functions: #1-5, 11, 13, 14, 16, 17, 19, 21, 22, 23, 24, 25

Section 1.5 - Inverse Functions and Logarithms: #1, 2, 3-11 odd, 14, 15, 17, 18, 19, 21-25, 29, 33, 35-41, 45, 47, 49, 50, 51, 53, 55, 56, 57, 61, 63, 65, 67, 69, 70, 71, 75

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The following are suggested homework problems from the textbook. This selection is taken from Stewart, Single Variable Calculus (Early Transcendentals), 8th Edition.

2.1: #1, 3, 5, 6, 8

2.2: #1-11, 15, 17, 19, 23, 29, 33, 34, 39, 41

2.3: #1, 2, 3, 6, 9, 10, 11, 15, 18, 19, 21, 23, 26, 27, 28, 29, 32, 37, 39, 40, 42, 44, 47, 50, 51

2.4: #2, 3, 4, 5, 7, 9, 11, 13, 14, 15, 17, 19, 21, 25, 29, 31, 39, 41

2.5: #1, 3, 4, 7, 11, 18, 19, 21, 23, 33, 35, 39, 41, 43, 44, 45, 46, 51, 53, 55, 71, 73

2.6: #2, 3, 7, 10, 13, 18, 19, 21, 24, 25, 30, 31, 33, 35, 38, 42, 43, 50, 65, 69

2.7: #6, 7, 9, 12, 14, 16, 18, 25, 29, 30, 35, 36, 40, 47, 50, 54

2.8: #2, 3, 6, 9, 10, 21, 24, 26, 27, 31, 37, 39, 43, 44, 45, 50

- 3.1: #4, 7, 9, 11, 13, 17, 19, 23, 28, 31, 35, 45, 51, 54, 57, 63, 65, 66
- 3.2: #4, 5, 6, 11, 13, 16, 22, 27, 35, 43, 49, 50, 51, 52, 59
- 3.3: #2, 5, 9, 11, 15, 17, 19, 21, 23, 28, 32, 33, 39, 40, 41, 42, 45, 46, 47, 48, 49, 51
- 3.4: #5, 7, 12, 14, 17, 21, 24, 28, 29, 31, 33, 37, 40, 44, 47, 50, 54, 60, 61, 63, 65, 66, 67, 71, 77, 78, 96
- 3.5: #3, 5, 7, 11, 15, 16, 19, 21, 23, 25, 28, 31, 32, 37, 40, 43, 49, 51, 52, 53, 55, 58, 60, 63, 73
- 3.6: #3, 6, 8, 11, 13, 19, 23, 31, 33, 37, 43, 44, 45, 47, 51, 52
- 3.9: #4, 6, 9, 11, 12, 13, 14, 16, 18, 20, 24, 27, 28, 29, 30, 31, 33, 37, 38, 40, 41, 42, 43, 46  
(HARD!)
- 3.10: #2, 3, 6, 11, 15, 20, 23, 24, 28, 29, 30, 33, 35
- 3.11: #1, 2, 3, 4, 5, 7, 9, 11, 20, 21, 23, 29, 30, 31, 32, 33, 35, 37, 39
- 4.1: #2, 5, 9, 22, 25, 28, 30, 35, 39, 41, 48, 52, 53, 55, 68, 78
- 4.2: #2, 6, 9, 16, 17, 21, 22, 24, 25, 36, 37
- 4.3: #2, 6, 7, 8, 10, 13, 16, 25, 31, 37, 62, 67, 71
- 4.4: #2, 7, 12, 17, 23, 25, 28, 29, 33, 34, 37, 39, 43, 44, 47, 49, 51, 53, 56, 57, 58, 61, 62, 65, 66, 67, 68
- 4.5: #9, 12, 22, 26, 29, 34, 36, 39, 45, 46, 49, 62
- 4.7: #2, 5, 8, 10, 13, 14, 15, 16, 19, 23, 28, 32, 33, 34, 35, 49, 59b, 60b, 63bc
- 4.8: #4, 5, 7, 13, 20, 31
- 4.9: #2, 4, 6, 15, 20, 33, 38, 41, 52, 53, 54, 64, 65, 68, 72, 74, 75
- 5.1: #4, 5, 7, 13, 17, 18, 20, 22, 23, 24, 25
- 5.2: #1, 3, 8, 12, 17, 18, 22, 29, 30, 33, 34, 35, 37, 47, 48, 49, 53, 59, 73, 74
- 5.3: #4, 5, 9, 12, 13, 15, 19, 23, 25, 31, 40, 51, 55, 69
- 5.4: #1, 2, 5, 9, 13, 17, 19, 21, 25, 29, 33, 37, 41, 45, 49, 50, 51, 53, 59, 60, 61
- 5.5: #1-73. **Seriously. Do as many of these as humanly possible.**