MAT 2440 Discrete Structures and Algorithms I	Text: Discrete Mathematics and its Applications, 7 th edition, by K. H. Rosen

Discrete Structures and Algorithms I	Homework
1.1 Propositional Logic pages 1 – 12	P. 12 : 1, 2, 3, 6, 9, 11, 14, 23, 27 - 31, 37, 44
1.3 Propositional Equivalences pages 25 – 34	P. 34 : 3, 4, 6, 9
Introduction to CAS	Does MATLAB recognize irrational numbers? Why?
	Is the decimal representation a rational number? Is
	1.55555 a rational number? Why?
1.4 Predicates and Quantifiers pages 36 – 52	P. 53 : 1, 3, 4, 7 – 13 odd, 19, 30, 36
1.5 Nested Quantifiers pages 57 – 64	P. 64 : 10, 27, 31, 33
1.6 Rules of Inference pages 69 – 78	P. 79 : 19, 20, 35 (written assignment)
CAS Logic	
1.7 Introduction to Proofs pages 80 – 90	P. 91 : 1 – 4, 9 – 12, 17, 18, 35
2.1 Sets pages 115 – 125	P. 125 : 11, 19 (a) & (b), 27, 29, 31, 35
2.2 Set Operations pages 138 – 152	P. 136 : 3, 15 (b), 17 (b), 21 - 23, 26, 46, 47, 49
CAS Sets	(written assignment), 52 - 55, 57
First Examination	
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CAS Floor and ceiling functions	23, 24, 30, 33, 39, 42 - 44, 58 - 61
2.4 Sequences and Summations pages 156 – 167	P. 167 : 3, 25, 29*, 30, 31, 33, 35 – 39 all, 43, 31
2.5 Cardinality of Sets pages 170 – 176	P. 176 : 1, 3, 11
3.1 Algorithms pages 191–195	P. 177 : 1, 3*, 5*, 7*, 11*, 13, 14, 16*, 17*, 18*, 27*
CAS m-files (maximum, linear search)	
3.1 Algorithms pages 196 – 198	P. 203 : 34, 35, 36, 37*, 38 – 41 all, 42*, 43*
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4.1 Divisibility and Modular Arithmetic pages 237 – 244	P. 244 : 15, 21, 29, 26, 27, 28, 30*, 31, 32
4.2 Integer Representations and Algorithms pages 245 – 254	P. 255 : 1 – 14 all, 25, 27, 32, 34, 47, 53*, 54, 55*, 56
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Discrete Structures and Algorithms I	Homework	
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4.5 Applications of Congruences pages 287 – 292	P. 292 : 2, 3, 6, 8*	
4.6 Cryptography pages 294 – 303	P. 304 : 1 – 5 odd	
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