

MA525 ASSIGNMENT SHEET Spring 2008

Text: E. Saff, A. Snider *Fundamentals of Complex Analysis*, Third Edition

We hope to cover most of the text, and in particular give full attention to the many interesting applications. This sheet will be updated throughout the semester, and I will make some remarks on several of the homework problems. The course will move fast, and it is important to come to class.

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Lesson	Section	Study	Homework Assignment
1	1.2	introduction	p 12: 3, 5[there is a clever solution!], 8 [make a picture!], 14, 17
	1.3	Polar coordinates; arg	p. 22: 3, 7 a,e,h, 10 [is this true for Arg in place of arg?], 11, 16, 17, 25, 28, 29
2	1.4, 1.5	Complex exponential (tentative: logarithm)	p. 31: 1c, 3 b,c, 7, 8, 13, 14, 20 [if $z \neq 1$, cross-multiply] – these formulas are useful in Fourier series, 22. p 37: 5 a,d,f, 7c
3	1.6, 1.7	Some “topology” [definitions]	p. 123: 1 a,c,d, 3, 5ac [this is a quadratic!]
4	2.1	review; Complex functions	p. 42: 2-7, 16, 17, 20; p.50 3, 4, 5 a,c,e
5	2.2, 2.3	limits, continuity	p. 56: 1 a-c, e, 4a,b 5,6b, 7a, 8a,b, 9, 13 XXX MISSING FILE
24	6.1	Residue Theorem	p 313: 1af, 3df, 6
25	6.3	Rational Integrals	p 325: 1, 3, 10a, 15b
26	6.2	Trig integrals	p 317: 1, 3, 5, 11
27	6.4	Improper	336: 2, 4, 8
28	6.5	Indent	p 344: 1ac, 5, 11
29	6.6	Branch Pts	p. 354: 2, 4, 8, 10
30	8.2-3	Fourier/Laplace transform	p. 473: 1abd, 3ac; [notice function graphed on p 469 is 0 for $ t > 6\pi$] p 484: 1ab, 3ab, 5s, 6ab
31	8.4	z transform	p. 494: 4a-d, 5ab, 6