

## Math 190 (Calculus 2) Final Exam Concepts

#	Concept	# of Problems on Final	Section in Larson Text	Problems from Final Review
1	Use Integration to solve applications involving Area	1	7.1	1a, 1b (2)
2	Use Integration to solve applications involving Volume of a solid of revolution	1	7.2 & 7.3	2a, 2b (2)
3	Use Integration to solve applications involving Arc Length / Surface Area of a solid of revolution	2	7.4	3a, 3b (2)
4	Use Integration to solve applications involving Work, Centroids, Fluid Pressure or Fluid Force	1	7.5 - 7.7	4a - 4d (4)
5	Determine the most appropriate integration technique for a particular problem and apply the technique (i.e. integration by parts, trigonometric substitution, trig integrals, partial fractions, or miscellaneous substitution)	3	8.1 - 8.5	5a - 5j (10)
6	Evaluate Improper Integrals	1	8.8	6a, 6b (2)
7	Determine the Convergence / Divergence of an infinite series using series tests	3	9.1 - 9.6	7a - 7h (8)
8	Determine the interval of convergence of a power series	1	9.8	8a, 8b (2)
9	Solve applications using Geometric Series, Power Series, and/or Taylor/Maclaurin series	2	9.9 - 9.10	9a - 9c (3)
10	Graph equations of Conic sections	1	10.1	10a - 10c (3)
11	Solve applications using parametric equations	1	10.2 & 10.3	11, 12, 13 (3)
12	Graph equations in polar form	1	10.4	15a, 15b
13	Convert back and forth between polar form and rectangular form	2	10.4	14a - 14d (4)
14	Find the Area or Arc Length in polar coordinates	1	10.5	16a, 16b, 17 (3)

**Total Problems on Final Exam      21**