Use the following list of questions as a quide in your review of material of Math 9C: Extra office hours: Tuesday Mar. 20, 2–3pm

- *The exam is on Thursday, 03/22, 11.30am – 2.30pm.*
- *In the exam, you have to show every step of your calculation.*
- *No calculator is allowed in the exam.*
- *A cheating will cause a serious consequence even for your whole life.*

(1) What is an infinite sequences? What is an infinite series?
(2) What is a geometric series?
(3) What is a p-series?
(4) What is the integral test?
(5) What is the comparison test?
(6) What is the alternative test?
(7) What is the absolute convergence? What is the conditional convergence?
(8) What is the ratio test? What is the root test?
(9) What is a power series? What is the convergence radius?
(10) What is the Taylor series? What is the Taylor polynomials?
(11) What is a revolution surface? What is the area of a revolution surface?
(12) What is the arclength of a curve?
(13) What is a differential equation?
(14) What is a solution of a differential equation?
(15) What is an initial value problem?
(16) What is a separable equation? What is first order linear equation?
(17) What is the remainder term of a series? What is the Taylor's estimate of the remainder?

Review Problems:

§**12.1:** 19, 21, 54, 68, 69. §**12.2:** 20, 25, 29, 33. §**12.3:** 1, 2, 4, 9. §**12.4:** 7, 9, 11, 30. §**12.5:** 10, 12, 14. §**12.6:** 12, 14, 24. §**12.8:** 8, 10, 27, 32. §**12.9:** 13, 17, 21, 25. §**12.10:** 3, 4, 6, 7, 9. §**12.11:** 8, 10, 20, 25. §**9.1:** 4, 17, 19. §**9.2:** 2, 4, 7, 9. §**10.1:** 1, 3, 9. §**10.3:** 1, 9, 14, 16. §**10.5:** 2, 3, 5, 9, 13, 18.