

MA 16020 Exam 3 Memo  
Wednesday, November 8, 2023  
6:30-7:30pm (plan to arrive no later than 6:15pm)

1. The exam will consist of 12 multiple choice questions covering lessons 19-27.
2. The exam location will depend on your instructor. The exams will be given at the following locations:
  - (a) CL50 224: Victor Hughes, Alexandra Cuadra, Dave Norris
  - (b) LILY 1105: Jakayla Robbins, Ben Doyle
3. You will be emailed an assigned seat before the exam. Bring this seating assignment with you to the exam.
4. Only a TI-30Xa calculator will be allowed on the exam. No other calculator will be allowed.
5. You MUST bring your PUID to the exam.
6. Since the exams will be machine graded, the only thing that will be graded is the scantron sheet. Make sure that you have correctly filled in all of the information (name, PUID, test form number, section number, and all of your answers) on the answer sheet.
7. Please reread the section on the syllabus regarding exams. Exceptions for any make-up exams are listed on the syllabus
8. There are review problems in LON-CAPA under Contents->Exam Review->Exam 2 Review. These review problems allow three entries before it will show the answer. You can get additional randomizations of each problem. There are also old exams for practice in LON-CAPA. The questions that are relevant for this exam are:  
Exam 2 Fall 2022: #10, 11, 12  
Exam 3 Fall 2022: #1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11  
Exam 2 Spring 2023: #11, 12  
Exam 3 Spring 2023: #1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
9. No one will be permitted to leave during the first 20 minutes of the exam; after the first 20 minutes, no one will be permitted to take exam.
10. Formulas that will be given on the exam:

$$\begin{aligned} \frac{1}{1-x} &= \sum_{n=0}^{\infty} x^n = 1 + x + x^2 + x^3 + \dots \text{ for } |x| < 1 \\ e^x &= \sum_{n=0}^{\infty} \frac{x^n}{n!} = 1 + \frac{x}{1!} + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots \\ \sin x &= \sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!} = \frac{x}{1!} - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots \\ \cos x &= \sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(2n)!} = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + \dots \\ \ln(1+x) &= \sum_{n=1}^{\infty} (-1)^{n-1} \frac{x^n}{n} = x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \dots \end{aligned}$$