Exam 2 Study Guide
MATH 165 - Fall 2020
Tufts University, Department of Mathematics

- **Moments**: expectation, variance, higher order moments

- **Concentration**: Chebyshev's inequality, laws of large numbers

- **Central limit theorems**: statements, hypotheses, use in estimating random sums

- **Moment generating functions**: definition, calculations, use in proving central limit theorems

The exam will consist of four questions (one on each of the above topics) and will last for 120 minutes. It is closed book— no books, notes, or other any other outside resources are permitted. It is recommended to study the homework first, then the class notes, then the textbook.