CITY UNIVERSITY OF NEW YORK

College of Staten Island
Department of Mathematics
Spring 2012

Math 102: Mathematics for Liberal Arts Students - Goldstein

Texts: For All Practical Purposes, 8th edition
: Study Guide to Accompany "For All Practical Purposes", 8th edition,
by Heidi A. Howard

The Quizzes & Applet exercises can be found at http://www.whfreeman.com/fapp8e

Module: Statistics

This module covers chapter 5, and should usually precede the module on probability. The goals of this chapter are to:

- Explain how to read several types of graphs depicting data, including histograms
- Explain how to compute and interpret mean, median, quartiles, standard deviation
- Explain the significance and usefulness of the normal curve

Lesson	***Lecture covers sections***	***Skills Check***	***Exercises***
1—2	5.1: Displaying Distributions 5.2: Interpreting Histograms 5.3: Displaying Distributions	1—7	15, 27a) graph – histogram (start at 1 with a class of 20) & stemplot (round to whole #'s)
3—4	5.4: Mean and Median 5.5: Quartiles 5.6: Five-Number Summary	8—14	27b) 27c) create a Boxplot
5—6	5.7: Standard Deviation	15—17	32, 33 (round tenths for stemplot, hundredths for SD) , 35
7—8	5.8: Normal Distributions 5.9: The 68-95-99.7 Rule	18—20	38, 39, 41, 42, 43 Applet Exercise #3,4 (page 182)
9—10	Study Guide –chapter 5 (p.123) Practice Quiz.		Online Quiz–chapter 5 **Print out the Quiz**

Module: Sampling and Margin of Error

This module covers parts of chapter 7, emphasizing 7.7 and 7.8. Prerequisites: 5.8 and 5.9.
Goals:

- Learn about unbiased random sampling
- Understand statistical inference from sample to population
- Compute margin of error using formula on p.231 (note importance of sample size).

Lesson	***Lecture covers sections***	***Skills Check***	***Exercises***
11-12	7.1 – 7.6: Introduction to unbiased random sampling	1—12, 14	
13-14	7.7: Statistical inference	15—17	36—40
15-16	7.8: Confidence intervals	18—20	42—46
17-18	Study Guide –chapter 7 (p.173) Practice Quiz.		Online Quiz–chapter 7 **Print out the Quiz**
19-20	**Exam #1**		

Module: Probability

This module covers chapter 8. The goals are:

- Explain what is meant by "random"
- Explain what is meant by "probability"
- Explain how to compute probabilities, including the use of counting
- Explain how to read the graph of a density function
- Explain the meaning of mean and deviation
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Lesson	***Lecture covers sections***	***Skills Check***	***Exercises***
21—22	8.1: Probability Models and Rules 8.2: Discrete Probability Models	1—8	4, 5, 7, 9
23—24	8.3: Equally Likely Outcomes	9—12	13, 18, 19, 25 X-tra Credit: Writing project #1 (p. 281)
25—26	8.4: Continuous Probability Models Density Curves	14, 17	30 X-tra Credit: 29
27—28	8.5: Mean and Standard Deviation	13	33, 36
29—30	Study Guide –chapter 8 (p.205) Practice Quiz.		Online Quiz–chapter 8 Print out the Quiz
31—32	**Exam #2**		All X-tra Credit due – (typed papers only)

Module: Financial Mathematics (Saving and Borrowing)

This challenging module covers chapters 21 and 22 of FAPP. Page numbers refer to the 8th edition of the main text or of the Student's Study Guide. Students will need a calculator with buttons x^y, e^x, and $\ln x$.

Lesson	***Lecture covers sections***	***Skills Check***	***Exercises***
33—34	21.1: Simple Interest	1, 2, 7, 8	5a, 6a
35—36	21.2: Compound Interest	4-6, 9	5bcd, 6bcd
37—38	21.3: Continuous Compounding	3, 11—16	15, 17
39--40	21.4: A Model for Investment	10	23--27
41—42	21.5: Exponential Decay 21.6: Real Growth and Value	17—20	41, 42 44
43—44	Study Guide –chapter 21 (p.497) Practice Quiz.		Online Quiz–chapter 21 Print out the Quiz
45—46	**Exam #3**		
47—48	22.1: Simple Interest 22.2: Compound Interest	2—8	1, 3 5, 6
49—50 51--52	22.3: Conventional Loans 22.3: Equity	9—15	29—32 33--36
53—54	Study Guide –chapter 22 (p.511) Practice Quiz.		
55—56	**Final Exam**		