Study Guide for Test 3, Math 125

(The test will be on Monday, May 12, and covers material from Chapters 20, 21, 23, 24, and 26.) Math 125 Kovitz Spring 2025

• The Expected Value and Standard Error (for the sum).

Chapters 17.1 through 17.2, pages 288 to 293: example 1; box on page 289, both boxes on page 291, and top box on page 292; page 373, problem 12; summary on page 307, points 1, 2, and 3.

• The Expected Value and Standard Error (for the sample percentage).

Chapter 20.2, pages 359 and 360; box on page 359 and bottom box on page 360; preferred formula in technical note on page 362 (very important); page 370, problem 3 (Key problem.); page 371, problem 1 (especially right-hand column); summary on page 373, points 2 and 3.

• Using the Normal Curve.

Chapter 20.3, pages 362 to 365: examples 1 and 2; bottom bullet on page 365; page 366, problems 1, 2, and 3 (c); page 371, problem 3 (parts (a) through (e)); page 570, problem 20; summary on page 373, point 3.

• The Accuracy of Percentages: Introduction.

Chapter 21.1, pages 375 to 379: expecially the top box on page 378 and example 1; page 379, problems 2 to 5; page 386, problem 4 (a).

• Confidence Intervals.

Chapter 21.2, pages 381 and 382: example 2; middle bullet on page 381 (main setup.); box on page 386; page 387, problems 5 (a) to (d), 6 (a) and (b); page 392, problem 5; page 435, problem 27; summary on page 394, points 1, 3, and 4.

• The Accuracy of Averages: Introduction.

Chapter 23.1, pages 409 to 412: examples 1 and 2; also technical note (ii) on page 415; top formula only in the box on page 410; both boxes on page 412; page 413, problems 1 to 3; pages 425–427, problems 1, 2(a), 3(a), and 10.

• Which SE?

Chapter 23.3; generally, do not use the formulas for the average and percent given on page 422, prefer the alternate versions found on pages 415 and 362; page 423, problems 1, 2, and 4 (a); summary on page 437, points 2 to 6.

• A Model for Measurement Error.

Chapter 24.1, pages 441 to 443: example 1; box on page 443; pages 444 and 445, problems 2–5.

• The Gauss Model.

Chapter 24.3, pages 450 to 452: example 5; boxes on pages 450 and 451; page 444, problem 4; pages 453 and 454, problems 5 (a), 5 (b), 6, and 7; pages 455 and 456, problems 1 (a), 3, and 10; page 572, problem 30; summary on page 457, points 1 to 5.

• The Null and the Alternative

Chapter 26.2, pages 477 and 478; box on page 477; page 478, problems 1 and 2; summary on page 500, points 1 through 5.

• Test Statistics and Significance Levels.

Chapter 26.3, pages 478 to 481; all boxes on pages 479 to 481; page 481, problem 1 (a); page 495, problems 1(a).

• Making a Test of Significance.

Chapter 26.4, page 482: first 4 bullets; page 483, problems 2 and 3.

• Tests of Significance Using Zero-One Boxes.

Chapter 26.5, pages 483 to 486 (read carefully); page 487, problems 6, 7, and 8; pages 495 and 496, problems 2 and 3.

Practices for Quizzes 4 and 5 and Test 3: all.

Homework 12: problem 1.

Homework 13: problems 1, 3a-e, and 4.

Homework 15: problems 1 and 2.

Homework 16: problems 1, 2, 3, 6, 7, and 8.

WeBWorK Homework 9: problems 2b, 6, and 9.

WeBWorK Homework 10: problems 1, 2a-e, 3, and 5.

WeBWorK Homework 11: problem 2.