

## Homework Math 5651, Fall 2005

### Homework 1, due Sept 13

Page 12: 1,4; Page 18: 4, 5; Page 22: 6, 8.

Cumulative results for the first assignment: 36, 36, 36, 36, 36, 36, 36, 36, 36, 36, 36, 36, 35, 35, 35, 35, 35, 34, 33, 33, 32, 31, 31, 29, 23, 14.

Class average 33.5

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### Homework 2, due Sept 27

Page 44: 6; Page 48: 7; Page 55: 5; Page 64: 2; Page 65: 9, 21.

Cumulative results for the second assignment: 36, 36, 34, 34, 33, 33, 33, 33, 31, 30, 29, 28, 28, 27, 27, 22, 22, 21, 20, 18, 17, 15, 13, 11, 10, 6, 2.

Class average 24

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The grades distribution after two assignments: 72, 72, 70, 69, 69, 69, 67, 66, 65, 65, 64, 63, 61, 60, 58, 56, 55, 54, 53, 52, 51, 49, 44, 41, 41, 36, 35, 31.

Class average 56.7

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The midterm 1 grades distribution 36, 36, 35, 34, 34, 33, 30, 30, 29, 29, 29, 29, 28, 28, 28, 27, 27, 25, 23, 22, 22, 18, 16, 15, 12, 7, 4.

Class average 25.4

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### Homework 3, due Oct 11

Page 65: 17; Page 77: 2; Page 78: 12 a; Page 102: 3; Page 109: 7, 10.

The distribution of grades for the third assignment: 36, 36, 36, 36, 35, 35, 35, 35, 35, 34, 34, 34, 32, 32, 31, 31, 30, 29, 29, 28, 28, 26, 25, 19, 19.

Class average 31.3

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The sums of grades for the first three assignments: 107, 106, 105, 104, 103, 102, 100, 100, 98, 98, 97, 97, 95, 92, 89, 84, 83, 81, 79, 79, 72, 68, 68, 64, 61, 60, 60.

Class average: 89.

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#### Homework 4, due Oct 25

Page 117: 4 a)-f) (explain your computations); Page 127: 5, 10; Page 136: 4, 10 with part c) Are the events  $\{X < 0\}$  and  $\{Y \geq 0\}$  independent?; Page 146: 9.

The distribution of grades for assignment 4: 36, 36, 35, 33, 32.5, 32, 30.5, 30.5, 29, 29, 29, 28.5, 28, 28, 25, 24.5, 23.5, 22.5, 22.5, 19.5, 19.5, 15.5, 13.5, 11.5.

Class average: 26.54

Sums of grades after 4 assignments: 139, 138, 138, 135, 135, 132, 131, 129.5, 129, 128.5, 128, 121.5, 121.5, 118, 114.5, 108, 101.5, 100.5, 96.5, 96.5, 92, 90.5, 88, 83.5, 75.5, 72.5.

Class average: 109

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#### Homework 5, due Nov 8

Page 157: 3 (note that you should solve the problem as stated, the answers in the back of the book are given for the version of the problem with  $x_i > 0$  in place of  $x_i > 1$ ), 8; Page 176: 7; Page 177: 6; Page 189: 11; Page 196: 7.

The distribution of grades for assignment 4: 36, 36, 34, 34, 34, 33, 33, 33, 33, 31, 31, 29, 27, 26, 22, 21, 21, 20, 20, 18, 17.

Class average: 28

Sums of grades after 5 assignments: 175, 174, 172, 168, 166, 164, 163.5, 161, 160, 150.5, 147.5, 141.5, 138, 135, 128.5, 128, 121.5, 116.5, 114.5, 113.5, 113, 101.5, 100.5, 96.5, 94.5, 88, 72.

Class average: 133.5      **OVER**

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The results of Midterm 2: 36, 35.5, 35, 34.5, 34, 33, 32, 31, 30, 28, 27, 27, 27, 26.5, 25.5, 25, 25, 23.5, 22.5, 22, 21, 19.5, 16.5, 16.5.

Class average: 26.9

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#### Homework 6, due Nov 22

Page 203: no 7; Page 209: no 12; Page 214: no 10; Page 221: no 4; Page 228: no 5 (Hint: Represent  $1 - X_k$  as a product of independent random variables.), Page 235 no 6.

The results for assignment 6: 36, 36, 35, 34, 33, 31, 31, 31, 30, 30, 27, 27, 26, 25, 24, 24, 22, 22, 21, 7, 7.

Class average: 26.6

Sums of grades after 6 assignments: 208, 208, 204, 203, 200, 193, 191, 190.5, 188, 177.5, 169.5, 169, 166, 165.5, 158.5, 155.5, 141.5, 137, 128, 121.5, 115.5, 113.5, 101.5, 100.5, 96.5, 95, 72.

Class average: 154.4

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#### Homework 7, due Dec 6

Page 251: no 9; Page 255: no 3, 8; Page 262: no 5 (assume that the number of misprints on each page has a Poisson distribution with parameter  $\lambda$ ); Page 267: no 2; Page 281: no 16.

The results for assignment 7: 36, 33.5, 32, 32, 30, 28, 28, 27, 26, 26, 25, 24, 24, 19, 18, 16, 16, 12.

Class average: 25.1

Sums of grades after 7 assignments: 243, 241, 232, 228, 224.5, 221, 219.5, 208, 199.5, 196.5, 194, 193, 188, 185.5, 181.5, 165.5, 145.5, 141.5, 140, 137, 131.5, 129.5, 114.5, 101.5, 100.5, 95, 72.

Class average: 171.4