Math 2311

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Office Hours: MW 11am to 12:45pm in 639 PGH

Online Thursdays 4-5:30pm

And by appointment

Class webpage: http://www.math.uh.edu/~bekki/Math2311.html

Popper 15

Given a uniform probability density function defined from X=0 to X=4,

1. Find P(X=2)

2. Find P(X>1)

Exam:
5 m/c and 3 f/r.
Covers sections 4.1 – 6.3

Ch 4:

Density curves –

Think about a density curve that consists of two line segments. The first goes from the point (0, 1) to the point (0.4, 1). The second goes from (0.4, 1) to (0.8, 2) in the xy-plane. What percent of observations fall below 0.40?

Consider a uniform density curve defined from $x = 0$ to $x = 6$. What percent of observations fall below 3?

Z-Scores

Finding probabilities:

$P(Z < 1.2)$

$P(Z > 0.9)$

$P(-0.8 < Z < 1.1)$

$P(Z < c) = 0.9223$, c=?

$P(Z > c) = 0.6385$, c=?

$X \sim N(45, 8)$

$P(X<48)$

$P(X>50)$

$P(36<X<50)$

Find x so that $P(X<x) = 0.7598$

Suppose we have a random sample of 400 values with mean of 60 and variance of 4. What is mean and standard error of $\bar{X}$?

What is $P(\bar{X} > 58)$?

Ch 5

x	3	4	8	15	16	20
y	22	28	28	42	33	42

Correlation?

LSRL?

Residual for x=8?

Good fit?

The following two-way table describes the preferences in movies and fast food restaurants for a random sample of 100 people.

	McDonald's	Taco Bell	Wendy's
Iron Man	20	12	8
Despicable Me	12	7	9
Harry Potter	6	14	12

What percent of the Despicable Me lovers also like McDonald's?

Ch 6: Simulations

What is the difference between an experiment and a study?

In the Statistics classes at UH, 50% of students have an A, 20% have a B, 20% have a C, 5% have a D, and 5% have an F. What digits from the random number table would you assign to simulate asking a student what grade they had in Statistics?

Suppose a class has 15 students. If we run a simulation, how many of our students have each letter grade? (use line 130)

Any questions from review sheet or practice test???

Popper 15

3. Find c such that $P(Z > c) = 0.7728$

4. The difference between an observational study and an experiment is that a treatment is imposed on the subjects in an experiment.

5. Suppose I use line 101 from the random digit table to simulate 10 flips of a coin. I decide to let an even number represent H and odd numbers represent T. I use single digits. What is the number of heads for the 10 flips?