6/08/20

Agenda for Math 5710 ♬ Meeting #25 ☻☺ 7/28/20 (8:00 a.m. – 9:10 a.m.)

1. Hello:

Brigham City:	Adam Blakeslee	Ryan Johnson	Tyson Mortensen	
Logan:	David Allen	Natalie Anderson	Kameron Baird	Stephen Brezinski
	Zachary Ellis	Adam Flanders	Brock Francom	Xiang Gao
	Ryan Goodman	Janette Goodridge	Hadley Hamar	Phillip Leifer
	Brittney Miller	Jonathan Mousley	Erika Mueller	Shelby Simpson
	Steven Summers	Matthew White	Zhang Xiaomeng	

2. Note the syllabus' activity list for today:

25: T/7/28	1. Deepen our application-level understanding of continuous random variables and their associate probability functions. 2. Take advantage of Quiz 25

3. Briefly raise issues and questions prompted by the following homework assignment:

   A. Study our notes from Meeting #24.

   B. Comprehend Jim's sample responses to Quiz 24's prompts.

   C. From the Video Page of *Canvas*, view with comprehension the videos named "mmContinuous Random Variables Mean Variance" and "mmContinuous Random Variables cum distr functions."

   D. Comprehend the 047A-C from our glossary.

4. Solve the following problem for our friend Dori :

Dori is a real estate broker who is in the process of determining how much she should bid on a tract of land. She receives a believable tip that a competitor for the property is planning to bid up to 3 million dollars. A bid is modeled as continuous random variable X with the following density function:

$f : \mathbb{R} \to \mathbb{R} \ni p(a \le X \le b) \ni f(x) = c(9 - x^2)$ for $0 \le x \le 3$ $\wedge$
$f(x) = 0$ for $x \in \mathbb{R} - (0, 3)$.

Dori does not know the competitor's bid but she wants to make a bid that is slightly greater than the competitor's bid. Please answer following questions to help Dori in her endeavor:

1. What is the value of c to assure that f is a legitimate density function?

2. What is the cumulative distribution function F and what are the probabilities of Dori losing the competition by making bids of either 1 million dollars or 2 million dollars?

3. What is the expected value and the standard deviation of the competitor's bid?

4. How much should Dori bid so she has a 90% chance of winning?

---

5. Take advantage of Quiz 25.

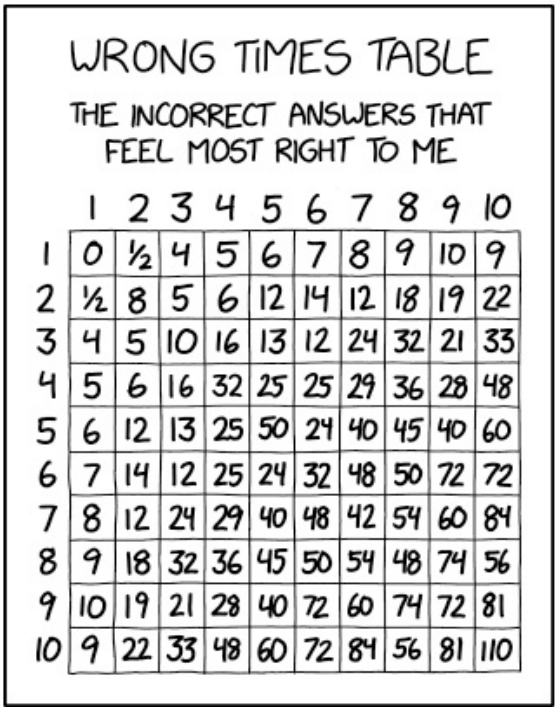
6. Complete the following assignments prior to Meeting #26:

   A. Study our notes from Meeting #25.

   B. Comprehend the sample responses to Quiz 25's prompts

   C. From the Video Page of *Canvas*, view with comprehension the video named "law of large numbers."

7. And from *XKCD*:



WRONG TIMES TABLE

THE INCORRECT ANSWERS THAT FEEL MOST RIGHT TO ME

	1	2	3	4	5	6	7	8	9	10
1	0	½	4	5	6	7	8	9	10	9
2	½	8	5	6	12	14	12	18	19	22
3	4	5	10	16	13	12	24	32	21	33
4	5	6	16	32	25	25	29	36	28	48
5	6	12	13	25	50	24	40	45	40	60
6	7	14	12	25	24	32	48	50	72	72
7	8	12	24	29	40	48	42	54	60	84
8	9	18	32	36	45	50	54	48	74	56
9	10	19	21	28	40	72	60	74	72	81
10	9	22	33	48	60	72	84	56	81	110