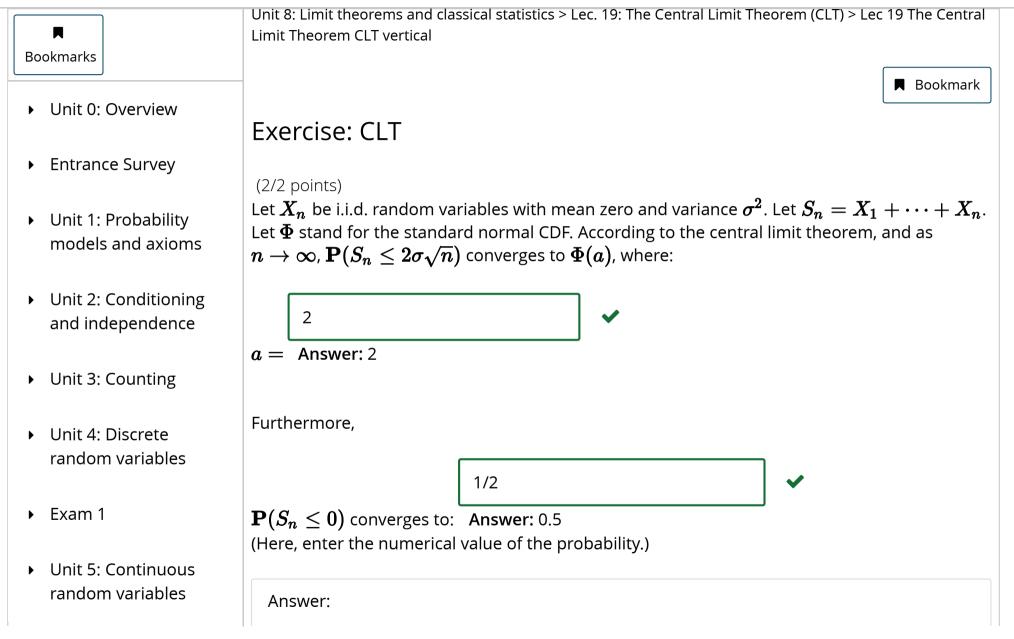


MITx: 6.041x Introduction to Probability - The Science of Uncertainty



- Unit 6: Further topics on random variables
- Unit 7: Bayesian inference
- ▶ Exam 2
- ▼ Unit 8: Limit theorems and classical statistics

Unit overview

Lec. 18: Inequalities, convergence, and the Weak Law of Large Numbers

Exercises 18 due Apr 27, 2016 at 23:59 UTC

Lec. 19: The Central Limit Theorem (CLT)

Exercises 19 due Apr 27, 2016 at 23:59 UTC

Lec. 20: An introduction to classical statistics

Exercises 20 due Apr 27, 2016 at 23:59 UTC

We have

$$\lim_{n o\infty}\mathbf{P}(S_n\leq 2\sigma\sqrt{n})=\lim_{n o\infty}\mathbf{P}\left(rac{S_n-0}{\sigma\sqrt{n}}\leq 2
ight)=\Phi(2).$$

Similarly,

$$\lim_{n o\infty}\mathbf{P}(S_n\leq 0)=\lim_{n o\infty}\mathbf{P}\left(rac{S_n-0}{\sigma\sqrt{n}}\leq 0
ight)=\Phi(0)=rac{1}{2}.$$

You have used 1 of 2 submissions

Solved problems

Additional theoretical material

Problem Set 8

Problem Set 8 due Apr 27, 2016 at 23:59 UTC

Unit summary

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