



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



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Unit overview

Lec. 8: Probability
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Bookmark

Problem 1: Normal random variables

(5/5 points)

Let X and Y be normal random variables with means 0 and 2 , respectively, and variances 1 and 9 , respectively. Find the following, using the standard normal table. Express your answers to an accuracy of 4 decimal places.

1.

$$\mathbf{P}(X > 0.75) =$$

0.2266274



2.

$$\mathbf{P}(X \leq -1.25) =$$

0.1056498

3. Let $Z = (Y - 3)/4$. Find the mean and the variance of Z .

$$\mathbf{E}[Z] =$$

-1/4



$$\mathbf{var}(Z) =$$

9/16



4.

$$\mathbf{P}(-1 \leq Y \leq 2) =$$

0.3413447

*You have used 1 of 2 submissions*

Printable problem set available here .

DISCUSSION

Click "Show Discussion" below to see discussions on this problem.

Lec. 10:
**Conditioning on a
random variable;**
Independence;
Bayes' rule

Exercises 10 due Mar
16, 2016 at 23:59 UTC

**Standard normal
table**

Solved problems

Problem Set 5

Problem Set 5 due Mar
16, 2016 at 23:59 UTC

Unit summary

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