

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



▶ Unit 0: Overview

- ▶ Entrance Survey
- ▶ Unit 1: **Probability** models and axioms
- ▶ Unit 2: Conditioning and independence
- ▶ Unit 3: Counting
- **▼** Unit 4: Discrete random variables

Unit overview

Lec. 5: Probability mass functions and expectations Exercises 5 due Mar 02, 2016 at 23:59 UT (4)

Lec. 6: Variance; **Conditioning on** an event; Multiple r.v.'s

Exercises 6 due Mar 02, 2016 at 23:59 UT 🗹

Lec. 7: Conditioning on a random variable; Independence of r.v.'s

Unit 4: Discrete random variables > Lec. 6: Variance; Conditioning on an event; Multiple r.v.'s > Lec 6 Variance Conditioning on an event Multiple r v s vertical

■ Bookmark

Exercise: Variance calculation

(1/1 point)

Suppose that var(X) = 2. The variance of 2 - 3X is:

$$\operatorname{var}(2-3X) = ig|$$
 18  $\checkmark$  Answer: 18

Answer:

The random variable 2-3X is of the form aX+b, with a=-3 and b=2. Thus,  $var(2-3X)=(-3)^2var(X)=9\cdot 2=18$ .

You have used 2 of 2 submissions

Exercises 7 due Mar 02, 2016 at 23:59 UT 🗗

Solved problems

Additional theoretical material

**Problem Set 4** 

Problem Set 4 due Mar 02, 2016 at 23:59 UT 🗗

**Unit summary** 

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