



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



Bookmarks

- ▶ Unit 0:  
Overview
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Probability  
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Discrete  
random  
variables

Unit overview

**Lec. 5: Probability  
mass functions  
and expectations**Exercises 5 due Mar  
02, 2016 at 23:59 UTC**Lec. 6: Variance;  
Conditioning on an  
event; Multiple  
r.v.'s**Exercises 6 due Mar  
02, 2016 at 23:59 UTC**Lec. 7:  
Conditioning on a  
random variable;  
Independence of  
r.v.'s**

Unit 4: Discrete random variables &gt; Lec. 5: Probability mass functions and expectations &gt; Lec 5 Probability mass functions and expectations vertical6



Bookmark

**Exercise: Expectation calculation**

(1/1 point)

The PMF of the random variable  $Y$  satisfies  $p_Y(-1) = 1/6$ ,  $p_Y(2) = 2/6$ ,  $p_Y(5) = 3/6$ , and  $p_Y(y) = 0$  for all other values  $y$ . The expected value of  $Y$  is:

 $\mathbf{E}[Y] =$ 

3



Answer: 3

Answer:

$$\mathbf{E}[Y] = (-1) \cdot \frac{1}{6} + 2 \cdot \frac{2}{6} + 5 \cdot \frac{3}{6} = \frac{18}{6} = 3.$$

*You have used 1 of 2 submissions*

Exercises 7 due Mar  
02, 2016 at 23:59 UTC

Solved problems

Additional  
theoretical  
material

Problem Set 4

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

Unit summary

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