Exercise: Linearity of expectations drill

(1/1 point)

Suppose that $\mathbf{E}[X_i] = i$ for every i. Then,

$\mathbf{E}[X_1 + 2X_2 - 3X_3] =$ -4 ✔ **Answer:** -4

Answer:
Using linearity,

$$\begin{aligned}\mathbf{E}[X_1 + 2X_2 - 3X_3] &= \mathbf{E}[X_1] + \mathbf{E}[2X_2] - \mathbf{E}[3X_3] \\ &= \mathbf{E}[X_1] + 2\mathbf{E}[X_2] - 3\mathbf{E}[X_3] \\ &= 1 + 2 \cdot 2 - 3 \cdot 3 \\ &= -4.\end{aligned}$$

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