

# Week 10 Study Guide

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## Covariance

See **Exercise 8.14, 8.16, 8.17** in the textbook.

## Conditional Distributions

See **Exercise 10.2, 10.8** in the textbook and the **Extra Practice Problem(s)** below:

1. Suppose that 20 percent of the students who took a certain test were from school A and that the arithmetic average of their scores on the test was 80. Suppose also that 30 percent of the students were from school B and that the arithmetic average of their scores was 76. Suppose, finally, that the other 50 percent of the students were from school C and that the arithmetic average of their scores was 84. If a student is selected at random from the entire group that took the test, what is the expected value of her score? Hint: Use conditional expectation.

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**Note:** This study guide is used for Botao Jin's sections only. Comments, bug reports: [b\\_jin@ucsb.edu](mailto:b_jin@ucsb.edu)