Discrete Structures

Counting

Chapter 4, Sections 4.1 - 4.3

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Basic Principles

$\diamondsuit$ **Sum Rule:** If a first task can be done in n_1 ways and a second task in n_2 ways, and if these tasks cannot be done at the same time, then there are $n_1 + n_2$ ways to do either task.

$\diamondsuit$ **Product Rule:** If a first task can be done in n_1 ways and a second task in n_2 ways, and if these tasks cannot be done at the same time, then there are $n_1 + n_2$ ways to do either task.