

Discrete Mathematics

Counting and Probability

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More Counting Principles

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1. How many 8-bit strings have at least one 0?
2. How many 8-bit strings have at least 2 zeros?
3. Metro State student ID is a 7-digit number beginning in 0 or 1.
 1. How many different student IDs have at least a 7?

Principle of Inclusion-Exclusion

For two sets A and B ,

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Example.

1. Of a group of first-year students at Metro State, 15 are taking math, 24 are taking writing and 9 are taking both. How many of these students are taking math or writing?
2. How many 2-digit numbers have a 2 or a 3 in their digits?