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For a very technical description of its construction and validation, see

www.rand.org/pubs/monograph_reports/MR1418/index2.html

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What do we mean by "random"? For our purposes we'll take it to mean that each student has an equal chance of being chosen for the sample.

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Perhaps they will have a tendency not to choose the first and last entries; perhaps they will select more often from the middle portion of the list.

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In this case, using a page from the RAND book, we could take the first 10 pairs of digits on the page (if 00 occurs, just take the next pair).

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The tests used to verify the randomness are described in:
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This was not always the case. In the 1970s IBM produced a software product called "Scientific Subroutine Package" (SSP) that had a flawed random number generator.

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`RAND()` approximates this experiment in the sense that it will return one of a large number of possible results (each being a number between zero and one) in a way that each has an equal chance of being chosen.

In addition, if we produce a sequence of such numbers, even though it is deterministic, it passes tests for randomness like those applied to the `RAND` sequence.