

# STATE AND PRESIDENTIAL SQUARE SETS

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With the 2004 presidential election looming, perhaps it is time to take belated notice of the fact that we presently live in a rare presidential square-set era. By a “square set,” I mean a set of things, the letters of whose names add up to some square number. Such sets are chiefly interesting for the fact that they evenly fill square grids; when they do so in such a way that all of their words remain intact and unbent, they are said to “pack” their grids. There are two broad categories of square sets, number-name square sets and non-numerical square sets. To the latter category, the familiar rosters of the U.S. presidents and the U.S. states currently contribute a total of five significant chronology-based square sets, as follows:

**Presidential Surnames** When George W. BUSH and Al GORE opposed each other in the 2000 election, it was assured that for just the third time in U.S. history a square set of all the presidents’ surnames would come into being. If Grover CLEVELAND is counted twice (as is generally done) for his two non-consecutive presidencies, then 43<sup>rd</sup> president BUSH completes a 17-square of presidential surnames comprising 289 letters. Previously, **seventh** president Andrew JACKSON’s **seven**-letter surname had completed a presidential **seven**-square, and 18<sup>th</sup> president Ulysses S. GRANT’s surname later rounded out a presidential 11-square. Jackson’s square is not packable, Grant’s barely is, and Bush’s almost certainly is.

For a product of historical happenstance, Grant’s square makes a surprisingly good packing puzzle; we won’t spoil it by showing a solution. For a really tough challenge, one could try to pack the current presidential square in what A. Ross Eckler has termed an “ordered” fashion, in which all adjacent names in an ordered sequence touch each other in the grid along the length of at least one cell. The odds are against this packing being possible, but one never knows.

**State Names** The 411 letters of the names of the current 50 states do not make a square set, but historically there have been two occasions on which the names of all the states did form square sets. Between the admission of LOUISIANA as the 18<sup>th</sup> state in 1812 and Indiana’s admission four years later, there was a total of 169 letters in the names of all the states, and between WISCONSIN’s admission as the 30<sup>th</sup> state in 1848 and California’s admission two years later, there was a total of 256.

Owing to the lengthiness of many state names, Louisiana’s 13-square is probably not packable, but Wisconsin’s roomier 16-square may well be. For anyone wishing to experiment with either of these squares, the order of statehood through Wisconsin is: DELAWARE, PENNSYLVANIA, NEW JERSEY, GEORGIA, CONNECTICUT, MASSACHUSETTS, MARYLAND, SOUTH CAROLINA, NEW HAMPSHIRE, VIRGINIA, NEW YORK, NORTH CAROLINA, RHODE ISLAND, VERMONT, KENTUCKY, TENNESSEE, OHIO, LOUISIANA, INDIANA, MISSISSIPPI, ILLINOIS, ALABAMA, MAINE, MISSOURI, ARKANSAS, MICHIGAN, FLORIDA, TEXAS, IOWA, WISCONSIN.

Lastly, as if to provide *yin* to balance the square set’s *yang*, the 2000 election also produced this numerological oddity, that the letters in the full state and presidential sets now add up to a combined total of 700—a *round* number, of all things. (Just like 2000 itself, come to think of it...)