A SELF-ENUMERATING CROSSWORD

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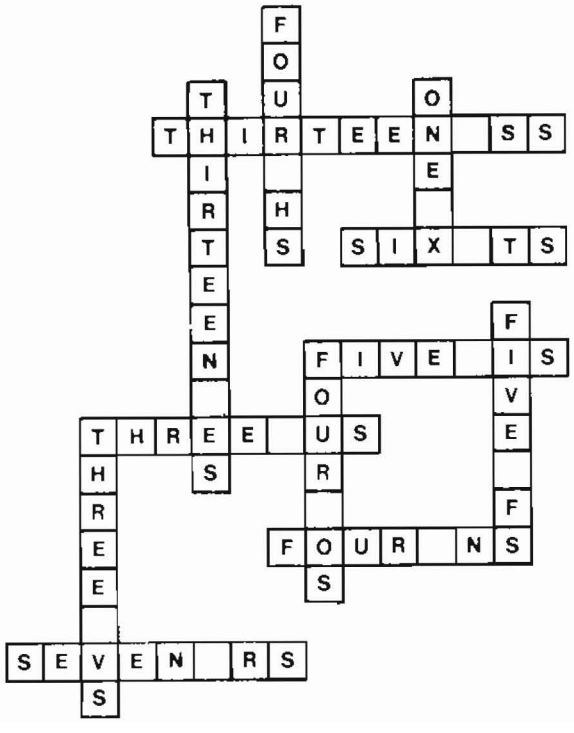
In the "self-intersecting reflexicon" below, one can indeed find thirteen e's, five f's, four h's, five i's, four n's, four o's, seven r's, thirteen s's, six t's, three u's, three v's, one x. More remarkably, only twelve letters of the alphabet are used: one appearing on each of the twelve intersections created! The layout is far from unique, though experiment suggests a specimen using eleven or fewer letters is extremely unlikely.

The pattern is constructed by using a computer program to search for a reflexicon - a reflexive lexicon or self-enumerating word list - of the above form, exhibiting some preassigned set of excess letters. A second program (due to Victor Eijkhout) juggles strips bearing the listed items until overlaps at intersects eliminate all excess letters. Various aesthetic criteria further delimit the range of admissible solution layouts. Accompanied by a suitable introduction, the empty grid can be presented as a novel form of crossword puzzle.