Real Word Squares

In a book published a few years ago,† we presented the first genuine word square ever constructed in English—a square consisting of words instead of letters, with all words in the square using the same number of letters (five). That unique square is reproduced here:

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SEVEN YOUNG, CRAZY MAIDS SHALL SMART!
YOUNG, BRAVE IDEAS MOVED ALERT MALES.
CRAZY IDEAS RULED THOSE WOMEN OFTEN.
MAIDS MOVED THOSE ITEMS NEVER AIRED.
SHALL ALERT WOMEN NEVER VOICE VIEWS?
SMART MALES OFTEN AIRED VIEWS FULLY.
```

The square is one of the sixth order, consisting of six 6-word sentences, each of which can be read both horizontally and vertically.

Since constructing the square, we have been busily at work trying to devise a real word square of the seventh order. Our first attempt, using 3-letter words, follows:

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USE OUR OLD, NOT OUR NEW, FAT.
OUR OWN MEN ALL TOP HIS MEN.
OLD MEN NOW SAW ONE HUT LET.*
NOT ALL SAW SHE WAS PUT OFF.
OUR TOP ONE WAS THE ONE RUN.
NEW, HIS HUT PUT ONE MAN OUT.
FAT MEN, LET OFF, RUN OUT MAD.
```

The asterisked word in the square serves a dual function. In the horizontal sentence, LET means "rented." In the vertical sentence, it is part of the verb LET OFF ("released"). Furthermore, the sixth sentence, both horizontally and vertically, is to be interpreted as meaning "Because it was new, his hut dis-

concerted one man." This meaning of the sentence is a little less than self-evident at a first reading, so that the word square is considerably short of an ideal one.

Our second attempt at a seventh-order word square switched to using four-letter words:

<table>
<thead>
<tr>
<th>MANY</th>
<th>GOOD</th>
<th>BOYS</th>
<th>WILL</th>
<th>HOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERY</td>
<td>LONG</td>
<td>GOOD</td>
<td>BOYS</td>
<td>WILL</td>
</tr>
<tr>
<td>UDES</td>
<td>TIRE</td>
<td>SOME</td>
<td>LADS</td>
<td>MARY</td>
</tr>
<tr>
<td>COME</td>
<td>MARY</td>
<td>ANNE</td>
<td>WILL</td>
<td>REST</td>
</tr>
</tbody>
</table>

The meaning of all of the sentences in this square is more or less self-evident. However, the square still has its imperfections. Again, we have asterisked one word. Horizontally, WILL is a masculine given name equivalent to "William." Vertically, it is an auxiliary verb. Also, the fact that the heroine of the seventh sentence requires a double name displeases us.

Several lines of development are indicated: (1) construction of squares with impeccable sentences; (2) construction of squares using uniformly longer words; and (3) construction of higher-order word squares. We shall be waiting anxiously for results from our readership. Don’t disappoint us, please.

CLASSY CURVES

In browsing through mathematics textbooks, we have long been impressed by the sonorous, dignified, and ponderous names borne by certain of the plane curves examined in higher algebra and analytic geometry. To keep you abreast of what is going on behind doors normally closed to the general public, we are listing the more interesting specimens here:

The CISSOID of Diocles . . . the CONCHOID of Nicomedes . . . the CUBIC of l'Hospital . . . the CURVE of Pursuit . . . the FOLIUM of Descartes . . . the HIPPOPODE of Eudoxus . . . the LEMNISCATE of Bernoulli . . . the LIMAÇON of Pascal . . . the OVALS of Cassini . . . the PEARLS of Sluze . . . the QUADRATRIX of Dinostratus . . . the SPIRAL of Archimedes . . . the SPIRALINES of Perseus . . . the TRACTRIX of Huygens . . . the TRISECTRIX of Maclaurin . . . the WITCH of Agnesi . . .

Read this sequence of titles aloud, several times in succession. You will gradually notice a feeling of exhilaration come over you, lending a radiant glow to your day.