Mnemonics, as most people know, are artificial memory-aids and may be part of an elaborate system, or an individual creation unrelated to any larger system. The word is from the Greek name of the goddess of Memory, Mnemosyne. Mother of the nine Muses, she must have been a veritable elephant of a goddess, memory-wise, to have lent her name to this fertile branch of endeavor. Unfortunately, no examples of her prowess in the 'remembering' field are extant, and it is suggested that all records of them were lost in the great fire that destroyed the Alexandrian Library some years ago. For various reasons, the initial 'M' of her name is silent, but we have encountered silent letters before in our own language, and this will not give pause. That mnemonics are useful is undeniable; that they are fun to construct is also true, but one must try it to believe it. For those who prefer an earlier system of remembering, that of tying a string around the finger, we can only say: if it works, OK. And let us say at the outset that this paper lays no claim to definitiveness and should be only considered as a personal exploration of an interesting subject.

For simplicity's sake we divide the field into three categories:

1) The time-tested, tried and true mnemonics that everyone knows. The authors of these seem, for the most part, to be obscure, if not actually unknown. "Thirty days hath September ..." falls into this category, and many more like it. I wonder if the authors survived long enough to witness the success of their jingles? On the other hand, in the case of the fine mnemonic for advancing or retarding our clocks twice a year -- "Spring forward, Fall back!" -- it is reasonable to believe that daylight-saving is of such recent invention that the author of those most useful lines has lived to see a well-earned success.

2) The more private kind of mnemonic which one may invent for his personal use and which would be of little use to anyone else. One's license number and phone number would fall into this category, along with one's Social Security number. A school-boy might invent one of these aids to help him recall an elusive formula, or a key history date. I remember a friend's telephone number, 2516, as being the square of five followed by the square of four. He, of course, remembers the number the way most of us remember anything we reiterate often enough -- by rote; and how he would laugh if he knew that each time I call him I have to go through the mathematics. If one has trouble
remembering whether stalactites or stalagmites descend from a
cave's roof or ascend from its floor (and we grant that the question
does not come up often unless one is a spelunker), or the differences
between 'capitol' and 'capital' or 'principle' and 'principal', apt
mnemonics are awaiting anyone with the ingenuity to make them.

3) Mnemonics which have not been invented yet for hard-to-remem-
ber, or new, subjects. Handy ways of remembering conversions
from our present system of measurement to the metric system are a
fruitful field of inventiveness, for, to paraphrase a New Yorker quip
of a few years ago about Christmas, "It's at our throats!" As a sub-
division of the third category, Mnemonics might be added which have
been invented for obscure subjects and which are harder to remember
than the subject itself. One example will suffice: a handy way, de-
vised hundreds of years ago, for the analysis and clarification of the
syllogisms of traditional Logic.

Barbara, Celarent, Darii, Ferioque, prioris;
Cesare, Camestres, Festino, Baroco, secundae;
Tertia, Darapti, Disamis, Datisi, Felapton,
Bocardo, Ferison, habet;
Quarta insuper addiv
Bramantip, Camenes, Dimaris, Fesapo, Fresison.
The mind boggles -- yet countless students over many a year have
been required to commit this atrocity to memory, and it is still to be
found in books of traditional Logic.

* * * * *

A recent piece of ours examined a way of minimizing the tedium
of waiting for a date to arrive. Our 'waiter' was in the Bar of a rest-
aurant with a fine collection of bottles before him whose labels suggest-
ed to him a kind of anagram game. We may have created the impres-
sion that restaurants as trystring-places are more trying than a number
of others, and we would point out that waiting is waiting anywhere, and
not much more tolerable in one spot than another -- although it must
be admitted that waiting outside the Superbowl in Miami, or at the be-
ginning of the Appalachian Trail in springtime, must be preferable to
a wait on the corner of Eighth Street and Fifth Avenue on a blustery
March day!

We now suggest that a splendid game may be played (with oneself)
using mnemonics. Say we have fifteen minutes to wait for a date: re-
ferring to our first category of old and trusted memory-aid s, how
many can we call to mind in fifteen minutes? We could grade our-
selves, too: 100 for perfect recall, 50 for imperfect, and 0 for just
remembering that there was such a mnemonic, but nothing else about
it. So, let's try it! Off we go!

Immediately, "Red at Night, Sailor's Delight ..." pops into mind.
100 right off! We glance at the sky and are gratified to see a pinkish
glow, boding well. Then, "Thirty Days hath September, April, May,
and November ..." -- or was it "June and November"? Both sound right, but one of them has to be wrong. Afraid I can take only 50 for that one. (Then, there was another method of counting those elusive days, by tapping the knuckles of one hand with a finger, but we forget the details, so it's a 0 for that.) But what of "Every Good Boy Deserves Fun", the famous mnemonic for remembering EGBDF, the notes on the lines of the musical treble clef? (How many children still remember in later life this smug phrase? And how many parents, alas, who considered it a touchstone of success, capable of transforming a child into a Rubinstein?) Well, anyway, there's another 100, and still a few minutes to go! Then, of course, who could forget "A Pint's a Pound the World Around"? Well, almost (we were taught, weren't we?). Too bad the Metric System is going to change so many things. (I think of the junction of Routes 32 and 212, to the North of our town of Woodstock. Those two numbers, as everyone knows, but few recognize out of context, are the freezing- and boiling-point of water, and that intersection will always be Fahrenheit Corners to me every time I pass it.) And what about "I for him and E for her!" to help you remember if that girl spells her name Francis or Frances? And from an old Physics book comes a dim memory of a hand encircling an electric wire. I still can see the thumb sticking out as though asking for a ride. Did the curve of the fingers follow the lines of force? Too long ago now ... But my 15 minutes are up and I have lost count of my score -- another time I'll have to devise a mnemonic to remember that. It was fun, but my date has not arrived. ** * * * * 

As said above, mnemonics of the second category are of a personal nature and though occasionally they might be of aid and comfort to others besides ourselves, it may be best to keep them to ourselves: for we do not ask of mnemonics that they make sense but that they work properly for us, however ridiculous they may appear to others.

In the third category, however, it is different, for the information therein is of a more general nature and may be shared. A few years ago we had the need of calling to mind the values of certain square roots. It was time-consuming, we thought, to consult the Tables each time one was needed, so in the end we designed the mnemonics that follow. Although made for private use, they could, perhaps, be of use to others. It will be noted that a word (usually Latin-based) in each sentence gives a clue to the number in question. 'Duet' derives from 'duo', for example, and relates to all the cognate 'duo' words we know; and 'two' immediately comes to mind. If the whole number to the left of the decimal point is omitted, it is because it can be so easily supplied at a moment's notice.

<table>
<thead>
<tr>
<th>Number</th>
<th>Mnemonic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>sing a duet</td>
<td>.414</td>
</tr>
<tr>
<td>3</td>
<td>trivial are we</td>
<td>.732</td>
</tr>
<tr>
<td>5</td>
<td>we are quints</td>
<td>.236</td>
</tr>
<tr>
<td>6</td>
<td>Rome used sesterces</td>
<td>.449</td>
</tr>
<tr>
<td>7</td>
<td>septic tank odors</td>
<td>.645</td>
</tr>
<tr>
<td>8</td>
<td>octaroon of eighties</td>
<td>.828</td>
</tr>
</tbody>
</table>
10 = I decide it .162

Some well-known constants, like the famous Fibonacci phi (1.618...), are easily remembered by similar sentences, in which the number of letters in each word equals a number in the constant. For phi the example comes to mind

A. Eckler a logophil ..... or, the Naperian constant, e (2.718...) with

Mr. Gardner, I hesitate to ridicule a mnemonic ..... and the familiar pi (3.1416...) with

Yes, I have a number ..... Our only concession to the Metric System (at the moment) is a small rhyme for converting Fahrenheit to Celsius:

F minus 32 / Times 5 over 9 / Gives C to you

In closing, a brief footnote on a possible pitfall in our subject. An old story, I believe, and possibly apocryphal, but it seems pertinent.

A man going to a large dinner must meet there a certain Mr. Humack who he has not known previously. "How on earth am I going to remember a name like that?" he grumbled to his wife. (It was a stag affair and she was not going.) "Silly!" she replied. "It's easy. Just think of 'stomach' and you've got it."

Returning later he found his wife still up, awaiting him. "Well," she asked, "did you meet your friend?" "No," answered her husband, "I couldn't find Kelly anywhere..."

So, happy remembering!