Wordplay based on Roman Numeral Letters (RNLs) is not new to Word Ways. Here, however, I attempt an overview of the subject, as well as introducing a variety of new RNL wordplay. As a whole, RNL wordplay can be divided conveniently into 2 types: non-numerical and numerical. The RNLs in non-numerical wordplay do not take on their RN values; RNLs in numerical wordplay are given their RN values. C IVIC is an example of the former, a word made of RNLs which is also a palindrome. ACTIVE can be used as an example of the latter when viewed as containing the RN for 104 (CIV).

The RNLs used here are, in alphabetical order, C, D, I, L, M, V and X. Medieval Roman Numerals (WWW87155 and 95183) are not admitted. A few hyphenated designations are offered where no solid words were found; phrases are not admitted. Unreferenced words can be found in the Oxford English Dictionary, Second Edition. Locations are taken from the United States Board on Geographic Names and are populated places unless stated otherwise. Other references appear at the end.

**NON-NUMERICAL RNL WORDPLAY**

Non-numerical RNL wordplay can be sub-divided into:

A. that in which the RNLs form part of the word

B. that in which RNLs account for the entire word.

**A. RNLs FORM PART OF THE WORD**

1 **Singularly Imperfect Romans (SIRs)**
   
   Only a single letter prevents certain words from being full RNL words. Here is a list of SIRs, not necessarily the longest ones. They encompass, in alphabetical order, one each of the 19 non-RNLs: CLIMAX, CLIMB, MIDDLED, FILMIC, VIGIL, CICHLID, JILDI (quick), CLICK, DICLINIC, CODICIL, LIMPID, IQLID (in Iran), IRIDIC, SILICIC, ILLICIT, MILIUM (millet), WILLI (type of nocturnal spirit), IDYLLIC, IZIM (a 17th century Hebrew word for goats - singular Ez).

   A satirical columnist for The (London) Times newspaper and author of The Calligrapher, Edward DOCX has a most unusual SIR name.

2 **Single Romans**
   
   By way of contrast, here is a selection of long words which contain only a single RNL. The first five can be found in Stedman’s MD or are inferred from words therein.
   
   ESOPHAGOGASTROSCOPES (20 letters), PHOTOROENTGENOGRAPHED (21), STEREOENTGENOGRAPHING (23), TELEOROENTGENOGRAPHY (20), ESOPHAGOJEJUNOGASTROSTOMOSES (28), OVERBOUNTEOUSNESS (17 - Web2), EXTRANEOUSNESSES (16 - Web2)

3 **Roman Strings**
   
   In Colloquy of the May 1999 issue of Word Ways, I offered ARMADILLIDIIDAE (pill bugs), a word with an uninterrupted string of 9 RNLs.
4 Roman Doubles
It is not difficult to find words which contain a doubled RNL and no other RNLs:
ACCOUNT, ADD, HAWAII, FULL, SUMMER, NAVY, WAXXEN (wax)
On the other hand, words with tripled and quadrupled RNLs and no other RNLs are rare:
III (see skillet 1. 1519 citation), WALLLESS (Web2)
III (sleepless - Tahitian), HMMMM (ats), JXXX and AJJAXXX (WW2001294)
The following words have different pairings of adjacent doubled RNLs and no other RNLs.
IIDDDA (Somalia) QUASILLNESS (Web2) ANTI-IMMUNE
ALLCCANJA (Peru) ROTTBOELLIINAE (gg)
Philip Cohen found the personal name REDDDLL in A.E. Vogt’s The Battle of Forever, Ace, 1971 (81155).

5 Roman Repeats
Certain words contain a preponderance of one particular letter. Here, I search for solid words with as many of a particular RNL as possible but which contain no other RNLs.
C CHROOCOCACEAE has 5 Cs D DEUDDYDD (Welsh: ‘two days’) has 5 Ds
I INHIBITIONIST has 5 Is L LLANLLYWEL (in Gwent, Wales) has 5 Ls
M MAMMOMONOGAMUS (a nematode worm - nz) has 5 Ms
V VERTVOYS (vertuous) has 3 Vs X UXXARBAX (China) has 3 Xs
Some locations and tribes boast even more Roman repeats:
CHANCACACCACCA (a mountain in Peru) has 7 Cs (and a 10-letter C+A string)
WAPISWISIBIWININIWAK (‘Swan creek men’, a band of Chippewa - Hod) has 8 Is
HULLFOELLELL (either a Chinookan or a Salishan tribe - Hod) has 7 Ls.
NOVOVARVAROVA (Russia) has 4 Vs.

6 Roman Beginnings and Endings
Words which begin and end with the same RNL are easy to find. However, when we require that the word contains no other RNLs it becomes difficult to find long words. Most of the longer words which begin and end with C, for example, end in -IC which disqualifies them.
COENOSARC DESEGGREGATED
INTERPRE}AR] LAUGHTERFUL
MAGNETOGRAM VENOV (venue)
XANTHONY (a crustacean - nz)
VOROBJEV is the surname of the joint author of Advanced Coal Mining, 1961.
Certain words begin and end with a doubled RNL, either the same or different. Some of these words have extraneous RNLs.
Same doubled RNLs: CCAMPATUYOC (Peru), CCARCPELLCHAAYACC (a locality in Peru) has 3 x CC, an LL, and 7 Cs in total.
DDOFYDD (see ‘ovate’) III (sleepless - Tahitian) LLALL (Welsh: another) MMMM (rt)
Different doubled RNLs: LLANFAREDD (Powys, Wales) VVALL (enter 1590 cit = wall)
VVEDENSKI (alternate surname of Wedensky, Nikolai E. – Stedman’s MD)

7 Invariant Romans
The RNLs in these words appear in their correct alphabetical positions within each word. They are invariants.
ENCOURAGINGLY, NECESSAR}IUM
The RNLs in each of these words appear in their correct alphabetical positions in relation to each other only. They are local invariants.
ANEC}OTARI AN CONGENITAL CRATERIFORM COUNTERROLMENT
DAUNTINGLY HYDROPHOTHALMY BIPALMATE KALMASHBASHEVO
VEX (Russia)
The RNLs in these words are reverse local invariants.
MARGINATED, HAMLETISH, PLENIPOTENCE, GLUTINATED, XAVANTE
8 Alphabetically-ordered Romans
The 5 different RNLs in each of these words occur in alphabetical order.
CARDIOPALMUS, CARDIO-OMENTOPEXY (both St), CHADILEUVU (stream-Argentina)
DIPLOMYSTAX (a fish)
The 5 different RNLs in each of these words occur in reverse alphabetical order.
EXEMPLARIC, OXALIDACEOUS, GOVERNMENTALIZED, MULTIDECK, VENYMELICHE (*venomly)

9 Hidden Romans
Rearranged, the letters of these 10-letter parent words make two 5-letter offspring. One of
these is a RNL word, the other contains no RNLs.

DISSOLVING SICCATIVES VICARIANCE CLAVIERIST
LIVID SONGS CIVIC TESSA CIVIC ARENA CIVIL STARE

In MERISMATIC and NUMISMATIC below, the letters of the RNL word MIMIC occur in the correct order in the parent word. In NONMIMETIC the letters of both offspring, MIMIC and the non-RNL NONET, appear in the correct order in the parent word. Alternatively, using TENON instead of NONET, the letters of MIMIC and TENON can be read forwards and backwards respectively.

MERISMATIC NUMISMATIC NONMIMETIC NONMIMETIC
MIMIC STARE MIMIC AUNTS MIMIC NONET MIMIC TENON
(in order) (in order) (both in order) (in order) (rev. order)

In MILLENNIA, MILLI and ANNE can be read forwards and backwards respectively.

In ENMILDEN (enmingle) the RNL MILD occurs unbroken inside the tautonymic non-RNL ENEN (old word for 'can'). In several words, the letters of MILD occur in order but not in one group. In each of MATILDA, MARIGOLDS, MISLEAD and MISELDEN (old word for 'mistletoe'), MILD can be lifted to leave another offspring which does not include any RNLs.

M I L D M I L D M I L D
AT A AR GO S S EA SE EN

Other RNL offspring can similarly be lifted from DISTALLY, MITRALLY, MISDOING and LIVERIED. In MIASMIC and MIOTHERMIC, MIMIC surrounds the non-RNL words AS and OTHER respectively.

DI LL MI LL MI D I LIV I D
STA Y TRA Y S O NG ER E

MI MIC MI MIC AS OTHER

10 Half Roman
The letters in the first half of the word DIVISORS are RNLs, whilst those in its second half
are not. Rearranging the letters of each half produces the RNL offspring VIDI and the non-
RNL offspring ROSS. For more examples, see my *Straight Down The Middle* (2004125).

11 Roman Records
Under the title *Roman Numerology* (99059), Dave Morice listed potential records for various
classes of word containing RNLs. In response to his EXTRAVEHICULAR (14), as the
Longest word with 5 different RNLs used once, I offered EXTRAVENTRICULAR which
has 16 letters (99104).

Here are more improvements:

*Longest word with 6 different RNLs used once*
LEVOCARDIOGRAM (14) from Stedman’s MD - to replace HEXADECIMAL (11)
266

All 7 different RNLs used once
In the August 2003 Colloquy, I mentioned CERQUEX-DE-MAULEVRIER, a location in France - to replace Dave’s coined OVERCLIMAXED

First and last names with greatest ratio of RNLs
In WW97055, Jed Martinez tells how he spotted the Roman name VIC VIDI, a resident of Coral Springs, on the local TV news - to replace IDI AMIN

Longest word with RNLs in odd positions only
MALACOCYCHLA (a bird 12 - nz) - to replace MOLECULE (8)

12 Silent Romans
RNLs are sometimes seen but not heard, as in these words:
C in MUSCLE, D in HANDSOME I in BUSINESS L in WALK M in MNEMONIC V in FIVEPENCE (pronounced ‘f’) X in BILLETDOUX
In RIEVAULX (Abbey), the I, L and X are all silent.

B. RNLs ACCOUNT FOR THE WHOLE WORD
There are only a few well-known words made exclusively of RNLs, especially of more than three letters: CIVIC, CIVIL, DILL, DIVI, LIVID, MIDI, MILD, MILL, MIMI, MIMIC, VILLI, VIVID.

1 Long Roman Words
For longer examples, it is necessary to turn to lesser-known words: CILDLIC (childly), CIMICIC (cimicic acid) and CIMICID (pertaining to insects of the Cimicidae - Dor). DIVIDIVI, with 8 letters, would appear to be the longest RNL word which has appeared in Word Ways. It is the name of a leguminous tree, and also the name of its pods, used in tanning and dyeing. I can now add eight more 8-letter RNL words, all locations. Five of these are tautonyms: DILIDILI (locality in Somalia), LIVILIVI (Bolivia), MIDI-MIDI (DR Congo), MILIMILI (Uganda), and VILIVILI (stream - Kenya); the remaining three are MILICICI (Bosnia-Herzegovina), and CIMCIMILI and XILMILLI (both in Azerbaijan). XILMILLI is also a Century word (assigning a=1, b=2 etc., its letter total = 100). However, there exist two 10-letter RNL tautonymic locations: LILIVILLIVI (a mountain in Chile) and XIMIM-XIMIM (Igarape Ximim-Ximim is a stream in Brazil).

2 Roman Transposals
Perhaps the most familiar of these is MID - DIM, which is also a reversal. Longer examples are found mostly amongst locations.

5 letters
These groups of 5-letter transposals each consist of three or more words.
CILMI (Somalia) - CIMIL (locality in Somalia) - MILIC (Bosnia-Herzegovina)
DIVIL - DIVLI (Afghanistan) - LIVID
DIVCI (Yugoslavia) - DIVIC (ridge in Yugoslavia) - VIDIC (Croatia)
LIVIL (Ginny Livil is a resident of California) - LIVLI (stream - Peru) - VILIL (Guatemala) -
VILLI (part of the small intestine; Villi Villi is a mountain in Bolivia)
DIDIM (stream - Cameroon) - IDMID (mt. - Lebanon) - IMDID (Timmay al Imid - Egypt)

MIDDI
CIVIL - CIVLI (Turkey) - VICLI (Vietnam) - VILCI (Vilci Izvor - Bulgaria) - VILIC
(Vilic Sele - Croatia)
DILDI (Ethiopia) - DILID - IDDIL (Nigeria) - IDLID (Admin. district - Syria) - LIDDI
(stream - Cameroon)
ILLIM (hill in Kenya) - IMLIL (Morocco) - LILIM (island in Papua NG) - LIMLI (Turkey) -
LLIMI (Llimi Kwan - wadi in Egypt) - MILLI
DILIM (Kirk Dilim Liman - bay in Turkey) - DILMI (Sidi Dilmi - shrine in Algeria) -
DIMIL (stream - Papua NG) - DLIMI (El Bachir Dlimi - Morocco) - IDLIM (pond - Sudan) -
LIMDI (India) - MIDIL - MILDI (Cameroon)

6 letters
Here are some pairs of 6-letter transposals.
CILCIM (Turkey) - MILCIC (Croatia) CILICI (Bosnia-Herzegovina) - ILICIC
DIMICI (Yugoslavia) - IMIDIC DIMIL (Turkey) - MILIDI (wadi - Algeria)
DIVICI - VIDICI (both Bosnia-Herzegovina) LILLILI (Guinea) - LILLII (msp)
VILCII (wadi - Egypt) - VILICI (Yugoslavia) VIVILI (stream - Mozambique) - VIVILI (Fiji)
The palindromic DIVVID (edd) transposes to the tautonymic VIDVID (Ukraine)
This group of 3 transposals consists of two tautonyms and a palindrome.
LIMLIM (wadi - Egypt) - MILMIL (stream - Ecuador) - MILLIM (F&W)

7 letters
DILIMLI (Turkey) - MIDILLI (island - Greece)

8 letters
LIVILIVI (Bolivia) - VILIVILI (stream - Kenya)

3 Roman Palindromes
6 letters
DIVVID (edd), ILlILI (a settlement in Samoa), IVIVI (‘small hills’ - Mangareva),
MILLIM (F&W), MIMMIM (a firm in Toronto)

7 letters
CILDLIC (childly); ILLILLI (‘disease’ - Choctaw), IMILIMI (a school in Kenya)

4 Roman Tautonyms
6 letters
DILDIL (Eritrea), LICLIC (spur - Peru), MVIMVI (stream - Gabon), LIMLIM (wadi - Egypt),
MILMIL (stream - Ecuador) and VIDVID (Ukraine)

8 letters
DIVIDIVI, DILIDILI, LIVILIVI, MIDI-MIDI, MILIMILI, and VILIVILI. For these and the
10-letter LLIVILLIVI and XIMIM-XIMIM see ‘Long Roman Words’ (1. above).

5 Roman Reversals
These RNL words make a different RNL word when read backwards. The sources of the
asterisked* words can be found in the list of Miami words (6. below).
DILDI* - IDLDI* IDDIL (Nigeria) - LIDD1 (stream - Cameroon) ILLIL* - LILLI*
LIVID - DIVIL MILLI - ILLIM (hill - Kenya)
LIMLIM (wadi - Egypt) - MILMIL (stream - Ecuador)

6 Roman Miami Words
A Miami word is one with the pattern 2?2?2, where ? can be any letter of the alphabet (see
Miami Words 2000014).
CICCI Bosnia-Herzegovina CIVCI Bosnia-Herzegovina DIDIDI river - Nigeria
DILDI Ethiopia IDLID Admin. Dist. - Syria IDMID mountain-Lebanon
ILLIL cove - Palau LICAL likely LIMLI Turkey
LLILL old Welsh word for a goat LILLI a girl’s name LIVLI stream - Peru
MIMMI stream - New Zealand VIMVI farm - Zimbabwe

7 Roman Triangle Words
The letters of the RNL words DIDDIM and ILICIC occur in the ratio 3:2:1. When arranged
with like letters on the same row they make triangles.
8 Roman Word Squares

The words of both the LIXI and MILLI squares below can be read in row order, from L to R, to produce a palindromic sequence of letters: LIXI XILI ILIX IXIL and MILLI ILLIL LLILL LIILL ILLIM respectively. Having an odd number of rows, the MILLI square also produces a palindromic letter sequence when rows 2 and 4 are read from R to L: MILLI LILLIL LLILL LIILL ILLIM. The VIDI square is not palindromic but it incorporates all the RNLs except C. Returning to the LIXI square, each word is composed of the letters I, I, L and X. Assigning  a = 1, b = 2 etc., the letter total of each word divided by the number of letters 54/4 = 13.5. Constructed of 4 balanced words, this a balanced square as well as a palindromic one.

<table>
<thead>
<tr>
<th></th>
<th>LIXI (China)</th>
<th>MILLI</th>
<th>VIDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>M I L L I</td>
<td>V I D I</td>
<td></td>
</tr>
<tr>
<td>IX</td>
<td>I L L I L</td>
<td>I X I L</td>
<td></td>
</tr>
<tr>
<td>I X</td>
<td>D I V I I</td>
<td>I L I M</td>
<td></td>
</tr>
<tr>
<td>I L</td>
<td>I L L I M</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9 Roman Pyramid

This RNL pyramid is constructed wholly from the names of locations.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>M I</th>
<th>L I M</th>
<th>I M L I</th>
<th>M I L I C</th>
<th>C I L C I M</th>
<th>M I L C I C I</th>
<th>C I M C I M L</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>I</td>
<td></td>
<td>I L I</td>
<td>C I L I M</td>
<td>M I L C I C I</td>
<td>C I M C I M L</td>
<td>I</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>M</td>
<td>I</td>
<td></td>
<td>L I M</td>
<td>L I L I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>I</td>
<td>L</td>
<td></td>
<td>I M L I</td>
<td>C I L I C I</td>
<td>C I M C I M L</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>L</td>
<td>I</td>
<td></td>
<td>I L I M</td>
<td>I L I M</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>I</td>
<td>L</td>
<td></td>
<td>I L I M</td>
<td>I L I M</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10 Roman Word Ladder

This ladder of 6-letter locations has side branches (shown to the left of the main ladder):

<table>
<thead>
<tr>
<th></th>
<th>Yugoslav</th>
<th>MICICI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MILIMI</td>
<td>blowhole in Chad</td>
</tr>
<tr>
<td></td>
<td>MILIDI</td>
<td>wadi in Algeria</td>
</tr>
<tr>
<td></td>
<td>MILICI</td>
<td>Italy</td>
</tr>
<tr>
<td></td>
<td>CILICI</td>
<td>Bosnia-Herzegovina</td>
</tr>
<tr>
<td></td>
<td>CIMICI</td>
<td>Bosnia-Herzegovina</td>
</tr>
<tr>
<td></td>
<td>CICICI</td>
<td>Croatia</td>
</tr>
<tr>
<td></td>
<td>VICICI</td>
<td>Croatia</td>
</tr>
<tr>
<td></td>
<td>VIDICI</td>
<td>locality in Yugoslavia</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>stream in Mozambique</td>
<td>VILI VI</td>
</tr>
<tr>
<td></td>
<td>creek in Papua NG</td>
<td>LILILI</td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>XILILI</td>
</tr>
<tr>
<td></td>
<td>stream in Malawi</td>
<td>DIDIDI</td>
</tr>
<tr>
<td></td>
<td>Yugoslavia</td>
<td>MICICI</td>
</tr>
<tr>
<td></td>
<td>DIMICI</td>
<td>Bosnia-Herzegovina</td>
</tr>
<tr>
<td></td>
<td>DIMILI</td>
<td>Turkey</td>
</tr>
</tbody>
</table>

11 Roman Shifts

By shifting the letters of certain words a given number of steps along the alphabet (wrapping round from Z to A), it is possible to convert words made with RNLs into shift words which contain no RNLs. The RNLs are given their alphabetical values (C = 3, D = 4 etc.).

D ID + 12 = PUP   MID + 12 = YUP   I LL + 19 = BEE   VIM + 18 = NAE (north 'no')
VIV + 6 = BOB/VIV + 12 = HUH/VIV + 18 = NAN
IXIL + 7 = PEPS

In WW99290, Dave Morice pointed out that "...the letters in THREE shift four steps along the alphabet to XLVII, the Roman numeral for 47. It's the only number that does this kind of shift..." (a number to number shift). This prompted me to try shifting groups of RNLs which are bona fide RNs rather than RNL words. The RNLs are given their alphabetical values.

| MDV + 1 = NEW | DCL + 2 = FEN | MXV + 3 = PAY | MVI + 5 = RAN |
| LIV + 6 = ROB | CXXI + 7 = JEEP | LXXVI + 9 = UGGER | CDLI + 11 = NOWT |
| DCCV + 12 = POOH | MCL + 15 = BRA | CDI + 16 = STY | CXX + 17 = TOO |
| XCV + 18 = PUN | DLII + 19 = WEBB | CIX + 22 = YET | MDCC + 23 = JAZZ |
| DCCV + 24 = BAAT |

The same length shift can be applied to different RNs to produce different words. For example, DCC + 24 = BAA, DCI + 24 = BAG whilst DCV + 24 = BAT.

In this context, a shift length of 22 seems to be particularly productive. Below, 3 letters are added, one at a time, and then 3 letters subtracted, again one at a time,

- LI + 22 = HE
- XLII + 22 = TEE
- XLVII + 22 = TREE
- XLI + 22 = TE

The letters of some RNL words can be shifted along the alphabet and the resulting letters rearranged to form shiftgrams which contain no RNLs.

- MIX + 7 (TPE) = PET/MIX + 18 (EAP) = PEA
- DIMID + 23 (AFJFA) = JAFFA
- VIVID + 22 (REREZ) = REZER
- CIVIL + 22 (YEREH) = HEYER (author Georgette Heyer)

**NUMERICAL RNL WORDPLAY**

The RNLs which appear below are given their RN values, either as single-letter RNs (I = 1, V = 5, X = 10, L = 50, C = 100, D = 500, M = 1000) or as multi-letter RNs (IV = 4, CLX = 660 etc.)

### 1. Orderly RNs

Each RNL in these words is treated as a single-letter RN, even when two or more occur adjacently. Each RN is greater in value than the RN which precedes it in the word:

- LACKEYDOM, IVANXOUYLENG (mountain in Laos), XABAALCAD (wadi in Somalia), and EVREUX-LE-COULDRAY (France) which has 5 of the 7 single-letter RNs.

By way of contrast, the value of each RN in these words is less than that of the RN which precedes it. Each word has 5 of the 7 single-letter RNs:

- MEGADACTYLIA (St), MACKELVIE, DECALVATION

### 2. Roman Numeral Transformations

This is the title of a Kickshaws item by Dave Morice which appeared in the August 1990 issue of Word Ways. In his words "Pick a Roman Numeral, any Roman Numeral, and replace the 'letters' by their positional values in the English alphabet. Add those values, and put the sum back into Roman Numeral form (e.g. VI = 22+9 = 31 = XXXI). Repeat the process until a previous sum appears". Beginning with a number between 1 and 100, Dave found that the longest sequence began with the number 77 and used sixteen different numbers in total before hitting on 30 for the second time:
270

77/LXXVII=100/C=3/III=27/XXVII=88/LXXXVIII=133/CXXXIII=102/CII=21/XXI=
57/LVII=52/LII=30*/XXX=72/LXXVIII=109/CI=36/XXXVI=103/III (=30* for the second time). For more of Dave’s item, see 90178.

3 Palindromic Roman Sandwiches

Replacing in the same way as above can be used to achieve a different end. Start off with the numerical palindrome I1. Convert it into a RN - XI. Now add the alphabetical values of X and I (24+9) and, bingo, another numerical palindrome (33) is the result! Here are more:

II. Convert it into a RN - XI. Now add the alphabetical value of A and I (24+9) and, bingo, another numerical palindrome (33) is the result! Here are more:

22 = XXII = 66 33 = XXXIII = 99
1001 = M = 22 2002 = MMII = 44 2882 = MMDCCCLXXXII = 141
3003 = MMMIII = 66 4554 = MMMMDLIV = 99 5225 = MMMMMC = 141

4 Replacing RNs with non-RNLs

A single-letter, or multi-letter, RN in a word is replaced by one or more non-RNLs having a total alphabetical value (a=1, b=2 etc.) equal to value of the RN (1 = 1, V = 5 etc.). The numbers show the values of the RNs.

Single-letter RN replaced by a single non-RNL

Only words which involve I (1 = A), V (5 = E) or X (10 = J) are eligible, because the RN values of L (50), C (100), D (500) and M (1000) each exceed 26.

IRE=ARE 5 VAT=EAT; SVEN=SEEN 10 SAX=SAJ (the Indian laurel)

Single-letter RN replaced by more than one non-RNL

This is not possible with the RN I (1) because it is represented only by the single letter A.

REV=REBAB (a plucked or bowed stringed instrument of Arabian origin)
10 RAX (racks)=RABH (f. rabbi) 50 LONER=SPOONER 100 COR=STRESSOR

Multi-letter RN replaced by a single non-RNL

Not possible with RNs III, IV or IX because they would have to be replaced by the other RNs C, D and I respectively (see 5. ‘Replacing RNs with a single RNL’).

2 HAWAI = HAWAB (mt. in Yemen) 6 VIEW = FEW
7 SHARVII (Bulgaria) = SHARG (Azerbaijan) 11 WAXIER = WAKER
14 BUJIVARA (India) = BUNARA (spring - Boznia-Herzegovina)
15 BOX-VAN = BOOAN
16 BOXVIKE Vette (hill - Sweden) = BOPKE (hill - Zimbabwe)
19 AXIXA (Brazil) = ASA (King of Judah-Bible)
20 EXXON = ETON
21 OXXIN (Scots. ‘oxxen’) = OUN (own)

Multi-letter RN replaced by more than one non-RNL

2 BLI (buy) = BAA
4 WAIVER = WABBER (Web2)
7 SHARVII = SHAREB Mah (Iran)
11 XISTER (for scraping bones) = FESTER
14 TXIIVA (Angola) = TAGFA (Morocco)
15 BOX-VAN = BOHEBAN (stream -)
16 SEXVIR (f. sexvirate, a body of six colleagues) = SEKER (sicker)
19 AXIXA (Brazil) = ABOBA (Cameroon)
21 OXXIN (Scots. ‘oxxen’) = OTAN (see Orang Otang 1802 cit.)
40 AXLE = ABRASE
41 AXLIR (a hill in Iceland) = AUGHER (collop 1641 cit. - Siege of Augher)
51 SLIT = SOUTHD 54 LIVER = POWER
56 PELVIS = PEANUTS 59 FELIX = FEASTS (Felix feasts!)
91 EXCITE = EROSTRATE (Botanical: not having a beak)
110 WACXS (wax) = WATERWORKS
150 CLAN = UNPYTHAGOREAN
152 CLINE = THROUGH-STONE (a horizontal grave-stone over a tomb)

Two replacements in the same word

1 + 5 KIRVE (to undercut a seam in coal-mining) = KAREE (a S. African tree)
6 + 50 VIAT = EAZES
10 + 50 AXEL = AJERUK (Uganda)
5 Replacing RNs with a single RNL

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3 WAI’II (Papua NG) = WAC (woke) 4 WAIVE = WADE 9 TWIXT = TWIT

6 Roman Magic

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In WW92051, Lee Sallows offered the following magic square made from number words.
The sums of the numbers are the same (216) for each row, each column and the two
diagonals. The sums of the RNs within the words are also the same (15) for each row,
column and diagonal.

SIXTY-TWO + EIGHTY + SEVENTY-FOUR = 216
EIGHTY-FOUR + SEVENTY-TWO + SIXTY = 216
SEVENTY + SIXTY-FOUR + EIGHTY-TWO = 216

Again in 92051, Dave Morice pointed out that, not only do the consecutive numbers FIVE,
SIX and SEVEN add to 18, but the RNs contained within them also add to 18 (IV + IX + V).
No other sequence of consecutive numbers does this but Dave found a non-consecutive
example: ELEVEN + SEVENTEEN + THIRTY-THREE = 61 both ways (LV + V + I).
I found TWELVE + SEVENTEEN + THIRTY-TWO which also = 61 both ways, and four
examples which use the minus sign, each = 8 both ways.

SIXTEEN - EIGHT SIXTY - FIFTY-TWO SIXTY-ONE - FIFTY-THREE
SIXTY-TWO - FIFTY-FOUR

These two examples, which also use the minus sign, each = 3 both ways.

EIGHTY-SEVEN - EIGHTY-FOUR NINETY-SEVEN - NINETY-FOUR

7 Roman Millennium

In The Roman Centurion (91182), Dave Morice mined Webster’s Second Edition to find
words which embody the one hundred Roman Numerals from 1 (I) to 100 (C). The fifty
words he offered do not contain any extraneous RNLs. For reference, here is Dave’s list:

1 IT 2 IBIS 3 INHIBIT 4 GIVE 5 EVE
6 VINE 7 VITRIFY 8 VITIATION 9 NIX 10 OX
11 EXIT 12 EXIGUITY 13 EXHIBITION 14 EXPENSIVE 15 EXTROVERT
16 EXUVIATE 17 EXUVIATION 19 EXTRAPEX 20 EXONARTHAX 21 EXOTOXIN
40 AXLE 41 AXIATION 42 AXIOM 44 EXPLETIVE 45 EXOLVE
46 EVOLVING 49 SILK* 50 LAB 51 LIP 52 LIAISON
53 LITIGATION 54 LIV 55 LOVE 56 LEVITY 57 LEVIRING
58 LOVE-INSPIRING 59 HELIX 60 LOX 61 LUXATION 62 LUXURATION
64 LUXIVE 90 EXCEPT 91 EXCITE 92 EXCIPIENT 94 EXCESSIVE
95 EXCURVATE 96 EXCAVATION 97 EXCAVATIONIST 99 HICK* 100 CAB

By exploring beyond Webster’s Second, I managed to fill 12 of the 50+2 gaps:

22 XUXIOWEI (China) 27 XAXAVITI (mt.-S.Africa) 30 XAAKAX (Mexico)
43 TEXTLINGUISTIK 49 EXPLETRIX 63 LGAXETGITINAI (Hod)
65 LEXVA (Hod) 66 LAXVIKEN (Sweden) 69 LUXURIEUX
70 LEXXUNA 93 EXCURSIONIZING 99 EXECUTRIX
(Ta’ Lexxuna - a locality in Malta)

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Extending this exercise, I searched for words embodying the RN values 101 (CI) to 1000 (M).

101 CHIP 102 PACIFIST 103 ACQUISITION
104 CARNIVORE 105 SCURVY 106 CAVITY
107 CHAUVINIST 108 CONVERSATIONIZING 109 CONFIX
110 COX 111 COAXING 112 COEXISTING
114 CONNEXIVE 115 CUXHAVEN 116 CESNY-AUX-VIGNES (France)
119 CAXANIX (Hod) 120 COXXS 121 CAXUXI (Mexico)
140 CAXALA (Angola) 141 TCEXULIN (Hod) 145 CHAUX-LEZ-PASSAVANT (France)
150 CALF 151 NUCLEI 152 CLIPPING
153 COALITIONING 154 CULTIVATE 155 ENCLAVE
156 CLEAVING 157 CALVINIST 158 CALVINIZING
159 SPECULATRIX 160 SCOLEX 161 CATALYSIS
190 CO-EXECUTOR 191 COXSAKIE 196 RESCUE-EXCAVATIONS
199 CO-EXECUTRIX 200 CUCKOO

201 ACACIA 202 ZUCCHINI 203 CONSCRIPTIONIST
204 CONCEIVE 205 CONCAVE 206 CONCAVITY
207 CONCAVITIES 209 CORRECTRIX 210 CACHET
211 CACOXENITE 212 SACROCOXIS (Dor) 240 COCARBOXYLASE
241 SACROCOXALGIA (Dor) 250 ACCELERATE 251 OCCLUSION
252 CYCLIZINE 254 OCCLUSIVE 255 CONCLAVE
256 CONCLAVIST 257 CRYPTOCALVINIST 259 BUCCALATRIX
260 CYCLOHEXANE 261 CYCLOHEXATRIENES 290 COCOACXCO (Mexico)
300 COCKROACH

301 COCCI 302 COCCININ 303 COTROPRECIPITIN (Web2)
304 CONCOCTIVE 305 CRECY-COUYE (France) 306 CACAJA V'RI (lake-Norway)
309 COCCIX 310 COCCYX 340 CHACHACUA XTE (Mexico)
350 COCCAL 351 COCCOLITE 352 COCA-COLONIZATION
400 CAD

401 CREDIT 402 CONDITION 403 CONDITIONING
404 SCREWDRIVER 405 CADAVER 406 CADAVERIZE
407 CADAVERIZING 409 COADJUTRIX 410 CARDEX
411 ARCHRODEXTRIN 420 CADOXTON-JUSTA-NEATH (a Welsh village)
450 CREDULOUS 451 CHANDELIER 452 SCANDALISING
454 COD-LIVER 455 ZRADLOVA (Zradlova Hut' - Czechoslovakia)
456 CHUYDELEYEVSKIY (Russia) 459 CHADALEX (France)
460 CANDLEWAX 461 CANDLEWAXING 500 WORD

501 ADHESION 502 DEFINITE 503 DIGITIZE
504 ADOPTIVE 505 ADVENT 506 ADVISE
507 ADVISING 508 DEVIATIONIST 509 ADJUTRIX
510 DESEX 511 DEOXYGENATION 512 DEOXYGENISING
513 DEXTROPPOSITIONING 515 HYDROXYPHERONE (St) 516 DEOXYVIRUS (St)
519 DEXTROSTIX 520 ADNEOPEXY 521 DEXTROTHYROXINE
540 DEXTRAL 541 DEXTRALISE 542 DESEXUALISATION
545 HYDROXYPHENYLPHYSUVATE (Dor) 550 YODEL
551 ADRENALIN 552 BOWDRIZERING 553 DELATINATION
554 DELIVER 555 DELVE 556 DELUVIAN
557 DELVINA KJON 559 SPONDULIX 560 QUADRUPLEX
561 DEFLEXION 562 DEFLEXIONIZE 563 DEFLEXIONIZATION
564 DEFLUXIVE 590 DEOXYCORTONE 591 DE-EXCITE
592 DE-EXCITATION 595 DEEP-EXTRA-COVER 600 DUCT

601 ABDUCTION 602 DECISION 603 DESCRIPTIONIST
604 ADJECTIVE 605 UNDERCOVER 606 DECURVATION
607 ZEDA-CHKVISHI (Georgia) 608 DECTRUX
610 ENDOCORTEX 611 HARDECOURT-AUX-BOIS (France)
640 DECARBOXYLASE 641 DECONTEXTUALISE 642 DECARBOXYLATION
650 DACTYL 651 DECENTRALISE 652 DECLASSIFICIES
653 DECENTRALISATIONIST 654 DECLARATIVE 655 DECAVANT
It only remains for me to remind readers that 666, the Number of the Beast is represented by six of the seven different RNs in descending order of their RN values - DCLXVI.
The year 1666, on the other hand, uses all seven RNs, once, again in descending value order - MDCLXVI.
Finally, the initial RN in the word CENTURY describes the whole word, making the rest of the word redundant; and I have it on good authority that the plant DILL has been seen growing over here in the nooks and crannies of HADRIANS WALL.

FURTHER READING

Topics which I have not covered include Chronograms (77214, 82143 and a variety of non-WW sources), Presidential Roman Numerals (2003141), Roman Windows (2003141, 2003221), 9-11 in Roman Numerals (2003138), Roman Numeral Cars (2000163), Romantic Squares (2003297).

NON-OED REFERENCES

ats = American Thesaurus of Slang by Berry and van den Bark, 1953
dfpf = A Dictionary of the Flowering Plants and Ferns by J.C Willis, CUP 1966
Dor = Dorland’s Medical Dictionary
edd = English Dialect Dictionary
F&W = Funk & Wagnall
gg = Genera Graminum (Grasses of the World) by W.D. Clayton & S.A. Penvoize
Hod = Handbook of American Indians, edited by F.W. Hodge, 1907
msp = A World List of Mammalian Species by G.B. Corbet & J.E. Hill, 1991
nz = Nomenclator Zoologicus
rt = Roget’s Thesaurus
St = Stedman’s Medical Dictionary
Web2 = Webster’s Second Edition