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NIK  NEUWAHL

LUDIX

Rules
of the game



Piatnik

LUDIX

A game of dice with Roman numerals
for 2 to 6 players from 10 years
by Niek Neuwahl, in cooperation with the
Swiss Museum of Games at
La Tour-de-Peilz
Piatnik Spiel Nr. 633898
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Contents:




4 special dice with faces L-X-X-V-I-I
A rules booklet

In addition, you need a pen and paper ready
to hand.

Object of the game:


Be the first person to score 300 points or more.






To play:

-  The player who is the first to say “Alea jacta est” has the privilege of being the first player.
-  The first player throws all four dice at the same time. He/she then forms an existing Roman numeral with the symbols shown on the dice. The Roman numeral corresponds to the number of points gained.
-  At this stage the player has two options:
 1. He/she can stop there and note the score, before passing the dice to the player on his left.


2. He/she can choose to throw the dice again. If this is the case, the player throws all four dice again, forms an existing Roman numeral and adds the points obtained to the previous points gained. The player can again decide whether to continue or not.

He/she can throw the dice as many times as an existing Roman number is obtained. He / she then notes the score. But, watch out: if the player cannot make an existing Roman numeral (the probability is 1:4), he/she loses all previous points obtained during his/her turn. It is then the next player's turn.

 These 14 combinations obtain the highest number of points:

VIII = 8		LIII = 53
XIII = 13		LVII = 57
XVII = 17		LXII = 62
XXII = 22		LXVI = 66
XXVI = 26		LXXI = 71
XXXI = 31		LXXV = 75
XXXV = 35		LXXX = 80
		

Certain throws of the dice allow the creation of other Roman numerals. However, these count less points, as for example XXIX = 29, but XXXI = 31.

 The 21 following combinations are incorrect: IIII (correct: IV), VIIII (correct: XII), VVVI (correct: XVI), VVVV (correct: XX), XVVI (correct: XXI), XVVV (correct: XXV), XXVV (correct: XXX), XXXX (correct: XL), LVVI (correct: LXI), LVVV (correct LXV), LXVV (correct: LXX), LLII (correct: CII), LLVI (correct: CVI), LLVV (correct: CX), LLXI (correct: CXI), LLXV (correct: CXV), LLXX (correct: CXX), LLLI (correct: CLI), LLLV (correct: CLV), LLLX (correct: CLX), LLLL (correct: CC).

For example:

It's Julie's turn to play. Her throw gives I-I-X-X. She can, therefore, form the numeral XXII = 22 points. She feels that this score is too low and decides to throw the dice again and gets L-V-X-I. This forms the numeral LXVI = 66 (the combination XLIV is also possible but only scores 44 points). In total Julie has scored 88 points. She decides to stop there and notes 88 points on the pad. Mark plays after Julie and throws I-X-V-I. He can form the numeral XVII = 17 points. He roles the dice again and is unlucky he gets LVVI. There are no Roman numerals in which there are two V's. So this time he scores 0 points. He then passes the dice to Luke for his turn.

End of the game:

The game ends when one of the players reaches 300 points or more. The players roll the dice until all players have finished the turn. The player with the highest score wins.



Dice in Ancient Rome



Throwing dice with a bottomless cup from which the dice do not stop falling to the ground. Then having to collect them vainly and continuously, almost like Sisyphus. This was the punishment imagined by Seneca for emperor Claudius when he was condemned to live in the netherworld. Claudius (emperor 41-54 A.D.) was indeed well known for his passion for dice games. It seems that Seneca, the famous philosopher and teacher of Nero obviously misunderstood or did not wish to understand this passion. In fact, Claudius played dice a lot because he was writing a book entitled “The art of dice play-

ing". As an erudite and curious emperor, he naturally wished to explore the phenomenon.



To discover if certain figures are more frequent than others in dice games (it is the case when playing with two dice and is the basis of the fascinating game of Craps), it is possible to determine this using mathematical calculations or by throwing the dice a large number of times. This is probably the reason why Claudius, as the Roman biographer Suetonius explained, asked to have a gaming table that absorbed vibrations installed in his carriage. The emperor could, thus continue, throwing dice and taking advanta-

ge of his travelling time to acquire new insights. Unfortunately, the book on dice written by the emperor has not been preserved but it can be supposed that this book contained interesting observations concerning dice as well as rules of complex games. It can even be imagined that Claudius, having introduced additional letters into the Latin alphabet, would have invented a set of new game rules himself.



This loss is all the more important as little is known of game rules used in roman times. Though, due to antique sources and numerous archaeological discoveries of dice

it is possible to deduce that these were greatly appreciated by Romans (and also, apparently, by Roman ladies). The Roman poet Ovidius (43 B.C.-17 or 18 A.D.) recommends dice and other games being used to seduce men or women. In his poem the poet also explains that three dice were played with, that the “the ruinous dogs” was to be avoided and apparently that bets had been placed on the throw. Other antique authors confirm this: the Greek philosopher Plato (428/427-348/347 BC) wrote that in dice games to obtain three six’s or three one’s depended on luck. In Julius Pollux’ Roman lexicon (2nd century AD) it can be read that the person who obtained more points than

his (her) opponent, won the bet, the lowest score being three aces whereas the highest is three six’s.



Archaeological excavations in former Roman cities and cemeteries have brought to light a large number of dice. They were generally made from bone, an easily-worked material and in which it is not difficult to cut cubes. The biggest dice were produced from long bones: these are hollow inside and the openings were then sealed with a bone plate. On Roman dice, points were carved in the form of small dots within a circle and were, normally, positioned in the same way as they still are to this day: the sum of

opposite sides equalling 7. 1 is opposite 6, 2 is opposite 5, and 3 is opposite 4. During Roman times, this distribution of points became standard in Europe. Until then, other ways of setting the points were also used and in the Near East these were continued to a later date. There are also dice with letters instead of dots but Roman numerals did not exist on antique dice intended for play.



Strangely, there are many Roman dice which are not really cubic but which are slightly longer in shape. Thus, four sides present longer rectangular faces whereas two sides present smaller square faces so

that these dice with four longer sides are similar to those used by Germanic peoples. Given that such a die lands more easily on the rectangular faces than on the square faces, the four rectangular faces are the ones which turn up most of the time. The distribution of the points is no coincidence: 1, 2, 5 and 6 appear on the longer sides whereas 3 and 4 appear on the smaller sides. The higher and lower values are therefore favoured (in India the four-sided long dice also use the values 1, 2, 5 and 6).



The attitude of Romans regarding dice games was ambivalent. On the one hand, dice

games were greatly appreciated, particularly when they were played for stakes, they were played in inns but, very probably, also in the streets. On the other hand, dice games, at least under Augustus's reign, were forbidden in public places except during the Saturnalia festivities in December. For some, they were considered as ruinous and dangerous, for others simply a waste of time. The Roman statesman and philosopher Cicero, a contemporary of Julius Caesar, observed that in games of chance such as dice games "greediness, superstition or error" were invoked and regretted that "fate and greediness governed the game much more than reason and reflection". 600 years later, Bishop Isidore

of Seville wrote that in dice games there were always conflicts and damage. As can be seen on a fresco in a Pompeian inn this reflection does not lack foundation: two players can be seen quarrelling over the score of the throw ("not three, but two"!) and between the two, the words of the innkeeper throwing both men outside "go outside if you want to fight!"

Later, Christian Romans did not resist dice games; they even asked Jesus Christ himself for help.

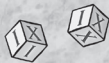


Roman numerals

In mathematical terms the Roman numeral system denotes natural numbers in a system of addition and subtraction using base 10 with an auxiliary base 5. What does this mean?

There are symbols to denote the numbers 1, 10, 100 etc. as well as the numbers 5, 50, 500 etc.

Symbol	I	V	X	L	C	D	M	ↀ	ↁ
Value	1	5	10	50	100	500	1000	5000	10000



Originally, these numbers were written in the form of notches. Then the characters were adapted to the Latin letters during Roman antiquity. I, V, X are the oldest Roman numerals. Number one is represented by a single slash. V for number 5 is no more than one half of X (the top half). No sign exists to represent zero.

So how are the figures 4, 17 or 129 written using these symbols? It is very simple. Symbols are placed from left to right in order of value starting with the largest. Until the number can be represented using the following symbol.

For example the figure 5 is not transcribed

by using notches IIII, but by using the symbol V., there is, therefore, no need to repeat the same character more than four times. The subtraction method is even clearer because no more than three identical characters are written in a row. Instead of writing the same character four times, deduct I, X or C from the next superior number by placing it directly to the left of the higher value (V, L, D or M): for example to write number 9, IX is written instead of VIIII. This notation was very wide-spread in the Roman Empire.



Examples:

$$I = 1$$

$$II = 2 (1 + 1)$$

$$III = 3 (1 + 1 + 1)$$

$$IV = 4 (-1 + 5)$$

$$VI = 6 (5 + 1)$$

$$IX = 9 (-1 + 10)$$

$$XVII = 17 (10 + 5 + 1 + 1)$$

$$XXXIV = 34 (10 + 10 + 10 + (-1 + 5))$$

$$XLIX = 49 ((-10 + 50) + (-1 + 10))$$

$$LXXXV = 85 (50 + 10 + 10 + 10 + 5)$$

$$CDXLIV = 444 ((-100 + 500) + (-10 + 50) + (-1 + 5))$$

$$DCXXIX = 629 (500 + 100 + 10 + 10 + (-1 + 10))$$

$$MCMLVIII = 1958$$

$$MMXIV = 2014$$

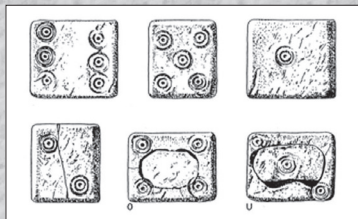
The symbols for base 5 numbers 5 (V), 50 (L), and 500 (D) only appear once in any numeral because they concede their place to the next highest power of ten for which there is a specific symbol: $2 \cdot 5 = 10$ (X), $2 \cdot 50 = 100$ (C) and $2 \cdot 500 = 1000$ (M).

During the Middle Ages, because of the difficulty of their use in written calculations, Roman numerals were, replaced in Central Europe by the Hindu-Arabic numeral system which is a positional decimal system including the use of zero.

But Roman numerals are still used today: watches often possess a Roman dial, kings and queens bearing the same name are dis-

tinguished using a Roman numeral (as in “Louis XIV” or “Elizabeth II”). Sometimes, in a book, the foreword pages are numbered with Roman numerals. And during the credits at the end of Hollywood films the year of production is also indicated in Roman numerals (for example MCMLXXV for 1975).

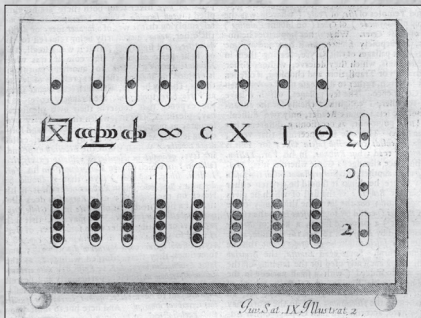




*Roman bone die from Vindonissa, Switzerland (see E. Schmid, *Beinerne Spielwürfel von Vindonissa*, Jahresbericht Gesellschaft Pro Vindonissa 1978 (1980))*



*Dice players, fresco in the Inn of Salvius at Pompeii, Regio V, Insula XIV 35 and 36 (see Emil Presuhn, *Pompeji. Die Neuesten Ausgrabungen von 1874-1881*, Weigel, Leipzig, 1882)*



Roman counting frame (see Barten Holiday, Decimus Junius Juvenalis and Aulus Persius Flaccus translated and illustrated, as well with sculpture as notes, Oxford 1673).



Clock-face with roman numerals



*Castle Gate (Burgtor)
to the Vienna Hofburg.*

Photograph by Andrew Bossi.



*Three Austrian Tarot cards,
the values of the trump cards
indicated by roman numerals.*

Can you think of another game that could be played with these „Roman“ dice? Send your proposals to Piatnik (email: info@piatnik.com or by post to Wiener Spielkartenfabrik, Ferd. Piatnik&Söhne, Hüttldorfer Straße 229-231, A-1140 Wien) or the Swiss Museum of games (email info@museedujeu.ch or by post to Musée Suisse du Jeu, Rue du Château 11, CH-1814 La Tour-de-Peilz). The most original will be published on our website.



Warning! Not suitable for children under 36 months. Contains small parts. Danger of suffocation. Please keep address for further reference



If you have any questions or suggestions for „Ludix“, please contact:
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