## Multiplex

a colourful
numbers card game
for children (from 6 years old) and adults

Order No. 20900

The game consists of 100 cards. Each card has a distinct colourscheme as follows:
All primary numbers are surrounded by a grey oval.
All other numbers (including primary numbers 2-7) are included in multiplication tables and are represented by different colours and shapes:

Times 2 table - two yellow circles.
Times 3 table - orange triangles. Times
4 table - light green square. Times 5 table - light blue pentagon. Times 6 table - orange hexagon (i.e. polygon with six corners). Times 7 table purple heptagon. Times 8 table dark green octagon. Times 9 table pink nonagon. Times 10 table - blue circle.

The first 10 shapes are repeated up to 100 with all divisible numbers represented. Therefore each card will illustrate which factors the number is divisible by and to which multiplication table the number belongs.
E. g.: card 15 contains an orange triangle and a light blue pentagon. Card 24 two contains yellow circles (2), an orange triangle (3), a light green square (4), an orange hexagon (6) and a dark green octagon (8).

## Rules

Number of players: 2-10. Each player receives the same amount of cards. For children aged 6-8 years start the game with 40 to 60 cards. For a game with fewer cards, remove the primary numbers and the higher numbers. A pile of cards may be left in reserve for three players or less.

## The games

Here are some suggestions. The games described below are of increasing difficulty. You may wish to invent your own rules once you are familiar with the game.

## Game 1 - For small children who are familiar with numbers up to 50, but who are not familiar with multiplication

Divide cards equally and leave a pile of cards if desired.

Each player offers a high number card; the one with the highest number wins and keeps the cards. If a player knows that he is not going to win a particular round he may offer a lower value card to save the higher number for a possible win in a later round.
The game can be stopped at any time or when the first player runs out of cards. The winner is the one with the highest cumulative score. A good exercise in adding up!
Variation:
Only even numbers
Only odd numbers
Only primary numbers

## Game 2 - Players need to understand multiplication

Beating your opponent with multiplication As in game one:
Instead of just beating your opponent with a higher number this must be part of a multiplication table. E. g.: player A puts card 22 on the table: player $B$ can beat player A with $24,26,28$ etc. If player $B$ plays 24 , he can be beaten by $26,28,30$ or $27,30,33$ or $28,32,36$ etc..
The rules can be limited to multiplication tables below 10 or above 10 to make the game more fun. In the latter case, all cards with a value of less than 10 need to be removed from the game.
Primary numbers can be beaten by higher primary numbers. E. g.: 31 can be beaten by $37,41,43$ etc ...
If a lower number is played to reserve cards, the same rules apply. E.g. player 22: you may add: 20, 18, $16 \ldots$
If the player does not have a card with the right number, a card can be taken from the reserve pile.
Winning and ending the game: as in game one.

## Game 3 - For players with good multiplication skills

Numbers can only be beaten by their own multiplication: This only applies to number 1-50. Numbers from 51 to 100 can be beaten by division. Some primary numbers are unbeatable. E. g.: 16, only beatable by $32,48,64$. and 23 only by 46,69 and 92.51 by 68 and 85 ( 17 times table), 90 only by 100 ( 10 times table).

## Game 4 - A more difficult version of game 2

You make up your own rules to exclude early times table e.g. 2 and 3 .e. g.: 6 cannot be beaten by 8 and 10 or 9 and 12 but only by 12, 18, 24 etc.

## Game 5 - The trump card game

This is an exciting game full of surprises. Choose one card and one number as trump. This card then beats all other cards. E. g. trump is 3, and then wins over any card not containing three.
Therefore 15 wins over 16, 17, 19, 20, $22,23,25$, but can be beaten with 18 , 21, 24, $27 \ldots 99$.

Winning and ending the game: The trump card with the highest value wins each round. To count up total winning, multiply the trump card value by 2 or 3 . It is therefore recommended to make a table with the names of all participating players and to enter the value of the trump card at the end of each round.

Endless variations can be created when familiar with the game. E.g. use the lowest number of a times table to beat the others, use consecutive times tables e. g. $2 x$ can only be beaten by $3 x$ or $4 x$ e. g.: 1 st card is 24 , this can only be beaten by 26 (2), 27 (3), 28 (4), 30 (6), 32 (8), 36 (12).

## Game 6 - The dice game

Open game with 2 dice, the highest number starts.
Each player sorts his cards according to colours and displays them openly. Then both dice are thrown. If any number on the cards is divisible by the number on the dice the card is turned over. Whoever has all cards turned over
first, wins the game. E. g., player A get $6+1=7$. Therefore turns over 56, 14, 21 ... Player B gets $2+1=3$ and turns over 18, 21 ... All primary numbers from 11 onwards require 1 or 11 to be obtained by throwing the dice. Each player can decide whether to use one or both dice, depending on whether the player needs a higher or a lower number.

## Game 7 - Memory with multiplex

This is the reverse of the previous game. All cards are put face down. One card is uncovered at random and the dice are thrown. If the card is non divisible by that number it is covered over again and its position is noted by the player to be uncovered when the appropriate number is thrown by the dice. This game is a lot of fun if one player throws the dice and the other players uncover the cards. The winner is the player who has all cards uncovered first.

